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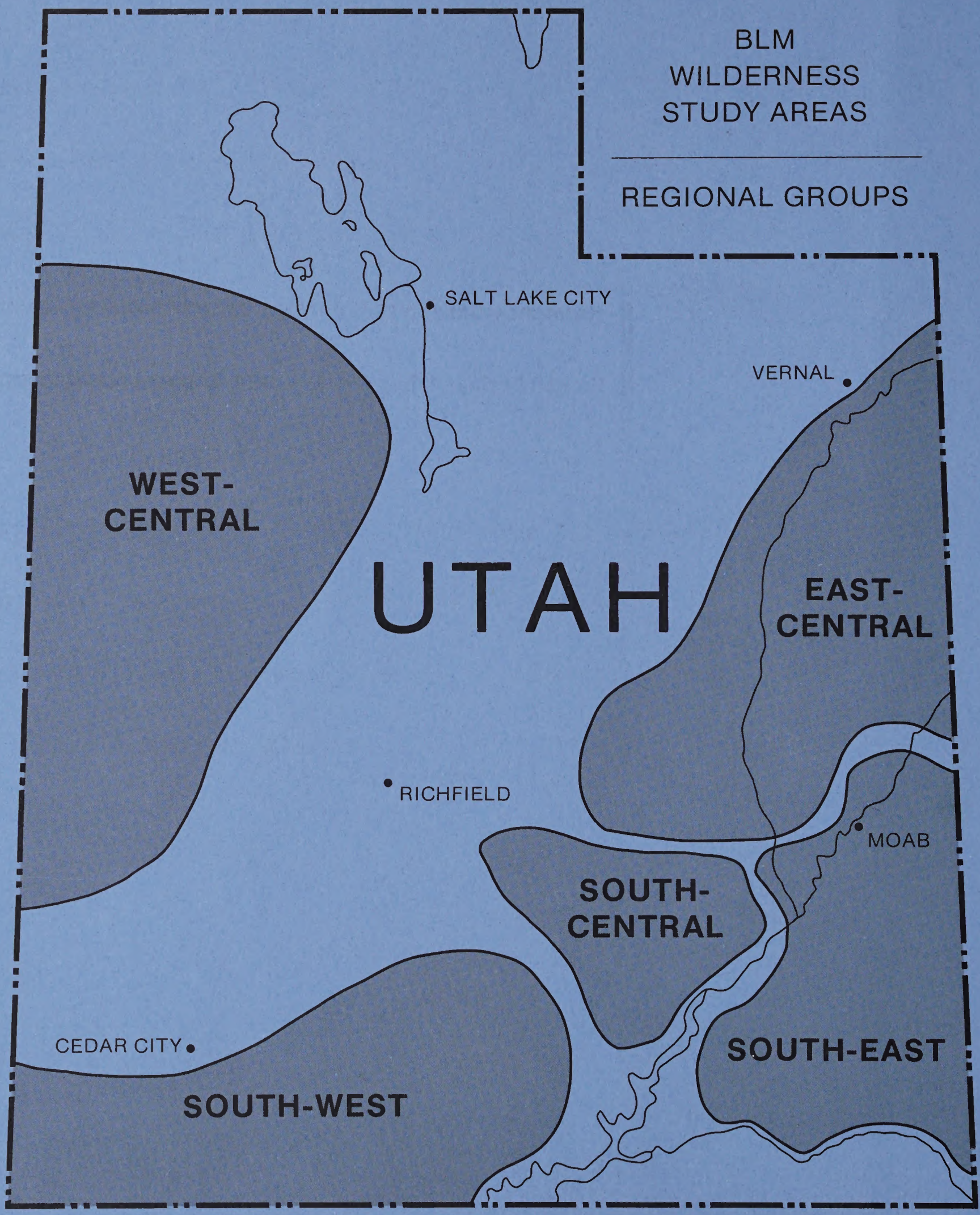
United States Department of the Interior
Bureau of Land Management

Utah State Office October 1991

UTAH STATEWIDE WILDERNESS STUDY REPORT

Volume IIB -Summary Analysis of Study Area Recommendations




BLM
WILDERNESS
STUDY AREAS
REGIONAL GROUPS
SALT LAKE CITY
VERNAL
WEST-
CENTRAL
UTAH
EAST-
CENTRAL
RICHFIELD
MOAB
SOUTH-
CENTRAL
CEDAR CITY
SOUTH-EAST
SOUTH-WEST

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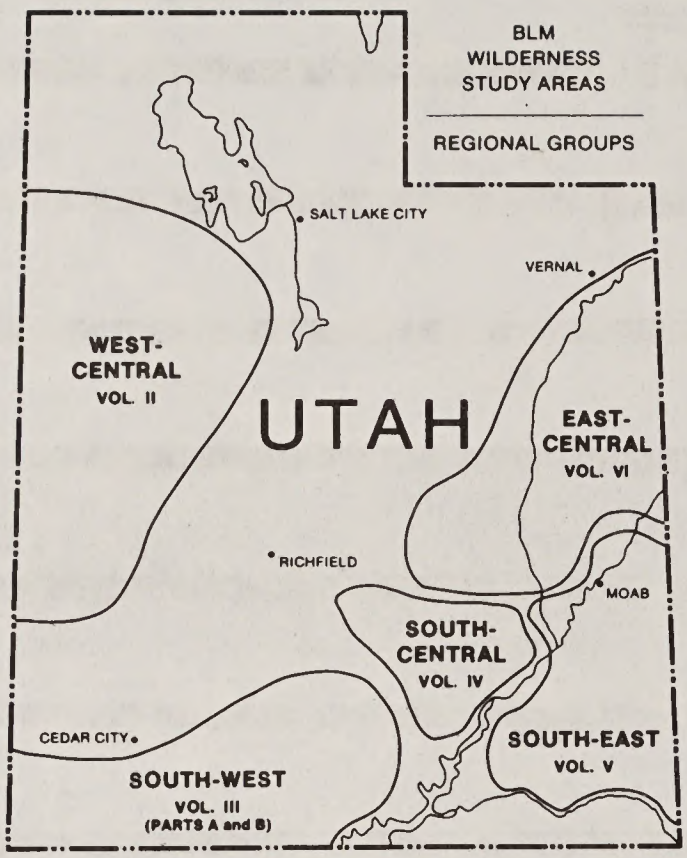
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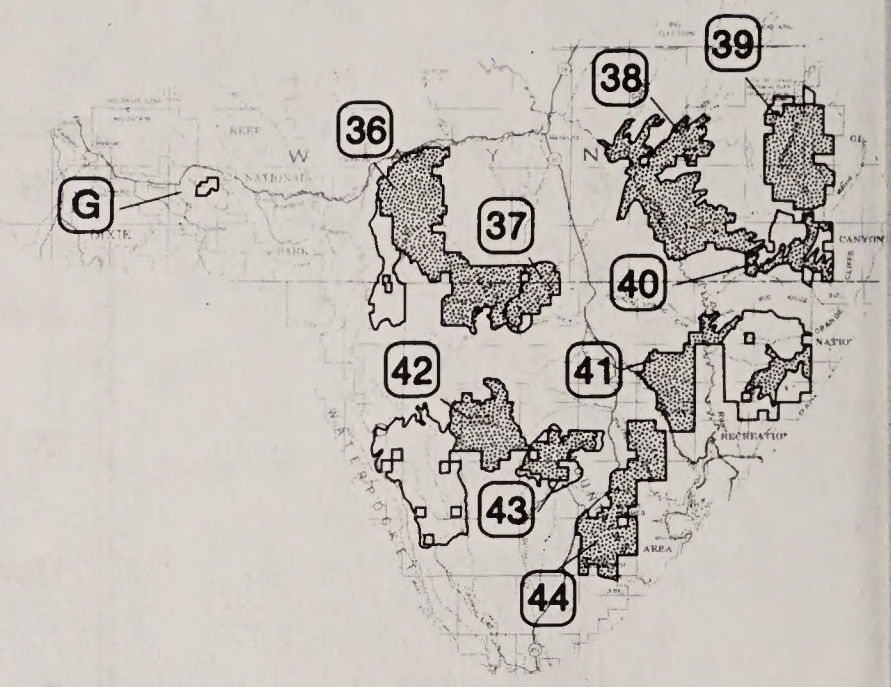
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South - Central Region

- Mt. Ellen-Blue Hills WSA
- Bull Mountain WSA
- Dirty Devil WSA
- Horseshoe Canyon (South) WSA
- French Spring-Happy Canyon WSA
- Fiddler Butte WSA
- Mt. Pennell WSA
- Mt. Hillers WSA
- Little Rockies WSA
- Fremont Gorge WSA

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MAP REFERENCE NUMBER/STUDY AREA

36 Mt. Ellen-Blue Hills WSA
37 Bull Mountain WSA
38 Dirty Devil WSA
39 Horseshoe Canyon (South) WSA
40 French Spring-Happy Canyon WSA
41 Fiddler Butte WSA
42 Mt. Pennell WSA
43 Mt. Hillers WSA
44 Little Rockies WSA
G Fremont Gorge WSA

BLM RECOMMENDATION

BLM WSAs or portions of WSAs that would be designated wilderness

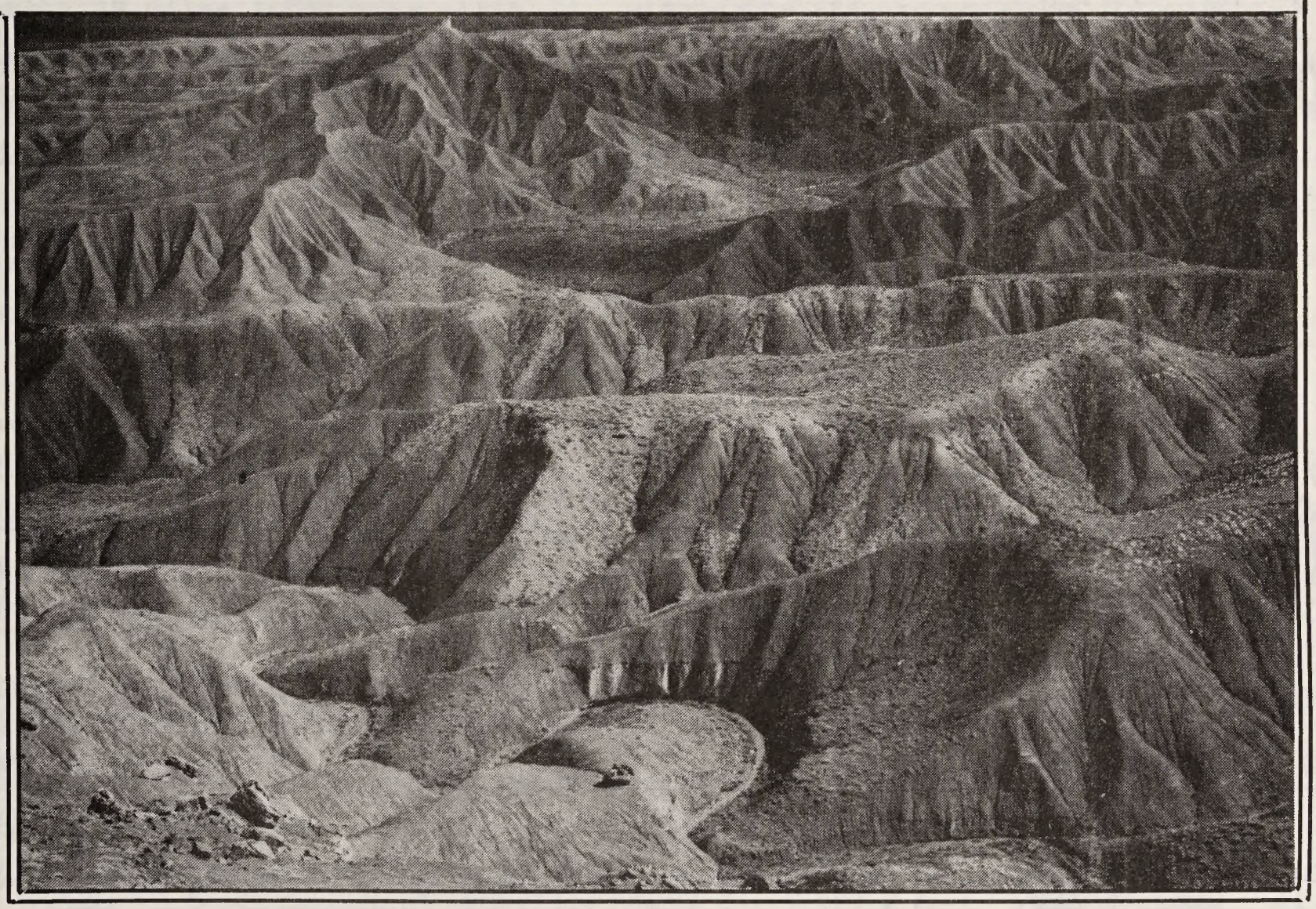
BLM WSAs or portions of WSAs that would NOT be designated wilderness

BLM WSAs under study by adjacent state

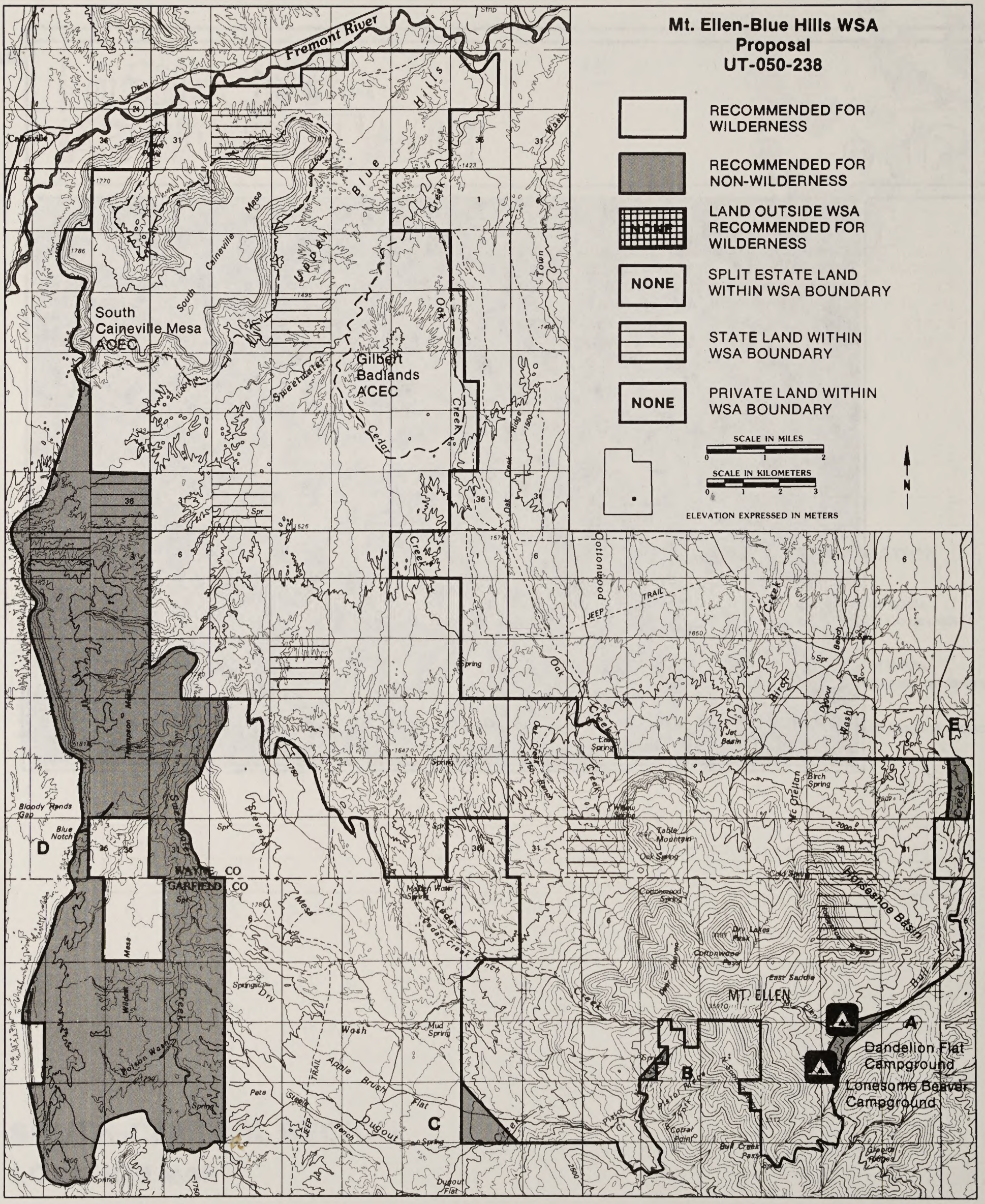
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SOUTH-CENTRAL REGION
LOCATION MAP

Mt. Ellen - Blue Hills WSA



MT. ELLEN-BLUE HILLS WSA



October 1991

MT. ELLEN-BLUE HILLS WILDERNESS STUDY AREA

1. THE STUDY AREA: 81,726-acres

The Mt. Ellen-Blue Hills Wilderness Study Area (WSA) (UT-050-238) is in south-central Wayne and northeastern Garfield Counties, about 10 miles southwest of Hanksville, Utah. The study area is shaped like an inverted letter "Y", and is about 19 miles long, from north to south, and 16 miles from east to west. The northern and eastern boundaries of the northern section and the northern boundary of the southern portion of the WSA are along section lines, in part separating the study area from State and private lands (see Map). The remaining boundaries of the WSA are along roads and topographic breaks.

The Bull Mountain WSA (UT-050-242) is adjacent to the southern portion of this WSA, separated by a dirt road. The WSA contains 81,726 acres of public land administered by the Bureau of Land Management (BLM). Nine State sections (5,945 acres) are inheld in the WSA. Seven sections (4,799 acres) would be within the area recommended for wilderness designation. No private or split-estate lands are within the WSA (see Table 1).

The Blue Hills, the northern and western portion of the WSA, are low mesas and barren badlands carved by erosion from blue-gray marine shales.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN WILDERNESS STUDY AREA	ACRES
BLM (surface and subsurface)	81,726
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	5,945
Total	87,671
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within WSA)	65,804
BLM (outside WSA)	0
Split-Estate (within WSA)	0
Split-Estate (outside WSA)	0
Total BLM land recommended for wilderness	65,804
In-holdings (State, private)	4,799
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	15,922
Split-Estate	0
Total BLM land not recommended for wilderness	15,922
In-holdings (State, Private)	1,146

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Mt. ELLEN-BLUE HILLS WILDERNESS STUDY AREA

The Mt. Ellen portion of the WSA consists of steep slopes and rounded peaks, including Mt. Ellen, with large basins and wide canyons. Mt. Ellen is part of the Henry Mountains, well-known in American geology for classical studies of intrusive mountain structures, upturned sedimentary rocks, and stream gradients. Mt. Ellen is the largest structural dome in the Henry Mountains, with a diameter of 12 to 15 miles. Elevations in the WSA range from 4,600 feet at the western boundary to 11,615 feet at the summit of Mt. Ellen. Predominant vegetation at the lower elevations is pinyon-juniper and saltbrush. Ponderosa pine, Douglas fir, and alpine fir grow at the higher elevations.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 65,804 acres would be designated as wilderness and the remaining 15,922 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
   65,804 acres
   (recommended for wilderness)
   15,922 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate 65,804 acres as wilderness and to release the remaining 15,922 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition.

The study area includes the northernmost and perhaps most prominent of the Henry Mountains. All of the area is natural, with outstanding opportunities for solitude on 92 percent of the area and primitive recreation on 56 percent.

Mt. Ellen at 11,615 feet, is the highest peak in the Henry Mountains. From the summit of its long, rolling ridge unfolds a panorama of dissected canyon country and mountain ranges. Two distinct landforms and vegetative areas characterize the WSA: the virtually barren Blue Hills badlands and the 11,000-foot peaks of Mt. Ellen, which support dense pinyon-juniper, aspen, and spruce-fir forests. Mt. Ellen and the Blue Hills form a single roadless area, one of the largest in Utah, of spectacular ecologic, scenic, and recreational diversity. The slopes of Mt. Ellen provide critical habitat for the nation's only free-roaming, hunted buffalo herd. Mule deer, elk, pronghorn antelope, and cougar also live here. Virtually all species of raptors can be seen during the migration season including golden and bald eagles and prairie falcons.

No conflicts exist with other uses, except for coal deposits with low potential for development and about 1,850 acres of vegetative treatments for the benefit of livestock and wildlife. The treatments would be foregone if the recommended portion is designated as wilderness.

Area A (see Map), is not proposed for wilderness designation because Dandelion Flat and Lonesome Beaver Campgrounds would be included. This was a drafting error during the BLM wilderness inventory.

Area B is not included in the recommended area because of a trespass road constructed in 1983 by the Tercero Corporation. The road is on a steep hillside where it would be very difficult to completely restore naturalness.

Area C is not proposed because it includes a chaining reseeding project and the proposed boundary line follows a road which is a more logical boundary.

This area also was originally mapped as inside the WSA because of a drafting error.

Area C is not proposed even though about 99 percent of the part of the WSA that is not proposed for wilderness designation is in a natural condition. The area not recommended lacks outstanding opportunities for solitude and primitive recreation. Potential land use conflicts exist with possible coal recovery at Wildcat Mesa and with potential vegetation treatments on 1,000 acres. Coal extraction at Wildcat Mesa is not expected in the short term, but may occur in the long term.

Area E is not recommended because it contains a pre-FLPMA right-of-way for development of water diversion structures and ditches. Facilities in the area and the existence of the right-of-way were overlooked by BLM during the wilderness inventory and study.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Most of the WSA is in a completely natural condition. Approximately 80,116 acres meet the criteria under the Wilderness Act for naturalness, and the remaining 1,610 acres, all outside the recommended portion, do not meet the criteria. Imprints of man include 9.3 miles of ways, five springs, 1 mile of pipeline, 2.5 miles of fence, six livestock reservoirs, two water diversion sites on Bull Creek, and the Lonesome Beaver and Dandelion Flat Campgrounds which were inadvertently included within the boundary of the WSA due to a drafting error.

In August 1982, approximately 4,000 linear feet of an existing way was upgraded and approximately 3.2 acres were cleared for an oil and gas exploratory drilling operation. The well did not produce and the drill rig was removed and all disturbed acreage was rehabilitated in March 1983.

A road along the North Summit Ridge on the southern boundary of the WSA was constructed in the fall of 1983 by the Tercero Corporation and was intended to be constructed entirely on private lands. After construction, it was discovered that the road had been inadvertently constructed inside of the boundary line of the WSA in four locations and disturbed naturalness on less than 2 acres. The road also cut off less than 5 acres from the main WSA. The Tercero Corporation made restitution and relinquished 166 livestock AUMs for use by bison as compensation for the trespass. The trespass could be resolved by any means the BLM deems necessary to be in compliance with the intent of BLM's Interim Management Policy (IMP) and to make necessary corrections to minimize the construction impacts in the area. BLM specialists determined that it would be very difficult to completely restore naturalness due to the nature of the hillside on which the road is located.

In 1984 approximately 167 acres of pinyon-juniper woodland (T. 31 S., R. 9 E., sec 23) was mistakenly chained and seeded because of a project mapping error. The chaining is being rehabilitated to meet naturalness criteria.

B. Solitude

Opportunities for solitude in the WSA are influenced by size, topography, vegetation, and absence of distracting sights and sounds. The WSA's size (81,726 acres) allows for recreationists to find solitude in much of the area. About 73 percent (60,000 acres) of the Mt. Ellen-Blue Hills WSA displays outstanding opportunities for solitude, all of which are in the portion recommended for wilderness.

Several large basins and ridges, such as Horseshoe Basin, Dry Lakes, and Deer Haven, provide separation and screening. Vegetation where it exists on Mt. Ellen also contributes to opportunities for solitude. Pinyon-juniper, aspen, ponderosa pine, and Douglas fir provide screening where found in the WSA. Mt. Ellen is the highest peak in the Henry Mountains and offers excellent vistas of

central Utah from the summit. The Blue Hills is an extensive network of badlands and ridges that provides excellent screening.

The western part of the WSA is sparsely vegetated, open, and relatively flat in numerous locations and opportunities for solitude are less than outstanding.

C. Primitive and Unconfined Recreation

About 45 percent (37,000 acres) of the WSA has outstanding opportunities for primitive, unconfined recreation. These opportunities are mostly in the southeastern part of the WSA. Opportunities for primitive, unconfined recreation exist in the other 55 percent (44,726 acres) but are relatively low in quality and less than outstanding for recreation use due to the barren and/or somewhat flat nature of the terrain.

The WSA has a diversity of recreational opportunities. Eight of these activities are above average or excellent in quality in part of the WSA. They include backpacking, camping, dayhiking, nature study, photography, geological and general sightseeing, and wildlife observation.

D. Special Features

Mt. Ellen is the highest peak in the Henry Mountains. The higher elevations of Mt. Ellen offer outstanding vistas of the geology of central Utah and the entire Waterpocket Fold.

The shale badlands at the lower elevations contain fossilized sharks teeth. The badlands are also of interest because of their role in the history of geomorphology from 1875 to the present. The four distinct life zones found in this WSA, i.e., the Upper Sonoran, Transition, Canadian, and Hudsonian Life Zones are of ecologic interest.

Portions of Mt. Ellen are summer range for the free-roaming Henry Mountain bison herd. The isolated, rugged terrain is also habitat for cougar, a wildlife species frequently associated with wilderness. Peregrine falcons and bald eagles, listed as endangered species, and six other animal species that are considered sensitive may inhabit or use the WSA.

Bristlecone pine was discovered in the WSA in 1973. The Henry Mountains are considered to be the southeastern limit for the Great Basin variety of bristlecone pine in the U.S.

One plant species (Sclerocactus wrightiae) which is listed as endangered, and three other plant species that are considered sensitive may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Arizona pine forest (7,172 acres), juniper-pinyon woodland (41,314 acres), saltbush-greasewood (31,240 acres), and spruce-fir-Douglas fir forest (2,000 acres).

Juniper-pinyon woodland PNV is well represented in the NWPS and BLM wilderness study areas nationally and in Utah. Saltbush-greasewood PNV is represented in only one established wilderness but is indicated for seventeen other BLM study areas; all of these areas, however, are in Utah only.

Arizona pine forest PNV is represented in three areas in the NWPS, none of which are in Utah, and the spruce-fir-Douglas fir PNV is not represented at all in the NWPS.

This information is summarized in Table 2, from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Arizona Pine Forest	3	26,300	8	12,878
Juniper-Pinyon Woodland	11	1,401,425	84	2,102,691
Saltbush-Greasewood	1	20,000	17	362,763
Spruce-Fir-Douglas Fir Forest	0	0	2	4,000
UTAH (COLORADO PLATEAU PROVINCE)				
Arizona Pine forest	0	0	8	12,878
Juniper-Pinyon Woodland	1	26,000	53	1,666,884
Saltbush-Greasewood	1	20,000	17	362,763
Spruce-Fir-Douglas Fir Forest	0	0	2	4,000

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREA**	**ACRES**
Salt Lake City-Ogden	11	1,099,962	78	2,177,949
Provo-Orem	11	721,793	90	2,705,142

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden and the Provo-Orem standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mt. Ellen-Blue Hills WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas

comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the WSA.

There are three designated wilderness areas within 100 miles of the WSA. On the southeast is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), and, to the southwest, the 25,751-acre Box-Death Hollow Wilderness (FS) and the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM). In the Canyonlands Section of the Colorado Plateau Physiographic Province, however, there are just three designated wilderness areas, totaling 64,280 acres. If designated, a Mt. Ellen-Blue Hills Wilderness would supplement wilderness areas in this region.

Manageability (The area must be capable of being managed effectively to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness designation can be managed as wilderness to preserve values now present in the area. Resource and land use conflicts are not now a problem in the recommended portion of the WSA and are not anticipated to be in the future. There are no existing oil or gas leases in the WSA. There are no known deposits of any leasable minerals except coal in the WSA, nor are there any active drilling, mining, or exploration activities for any leasable minerals. The only area considered feasible for surface coal mining is the Wildcat Mesa area, an estimated 2,825 acres. However, this area is not recommended for wilderness designation. In the long term, the coal resources may be mined, resulting in some loss of solitude in the designated portion for the duration of mining. Two hundred and nineteen of the 231 mining claims in the WSA are in the area recommended for wilderness; however, there are no known deposits of locatable minerals in the WSA.

There are seven State-owned sections (4,799 acres) in the recommended area. Major developments on these sections and related access and activity would reduce the quality of wilderness values, but the potential for development is low. Therefore, provision of access to these lands is not expected to be a manageability problem.

Livestock grazing could continue as at present, requiring little or no change in management.

The area not recommended for wilderness designation also could be managed as wilderness, although it would be more difficult to do so. The oil and gas leases have been phased out and new leasing would not be allowed. There are 12 mining claims, and two State-owned sections in this portion of the WSA, but developments that would reduce the quality of wilderness values are not projected in the foreseeable future. In the long term there could be some surface coal mining that would require special management to assure maximum possible protection of wilderness values. BLM has concluded that nonwilderness uses and resources could be managed in a manner that would not degrade most of the wilderness values in the 15,922 acres not recommended for wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) examined the mineral and energy resource potential in 58,480 acres in the WSA, i.e., 7,324 acres less than the portion that is recommended for wilderness designation (USGS, Miscellaneous Field Studies Map MF-1756A, R. F. Dubiel, et al., 1985). The pamphlet accompanying the map states that the potential for coal, uranium, base metals, and oil and gas resources is low. Materials that could be used for construction purposes are present in the area that was studied and have economic potential. These materials include sand, gravel, and gypsum, which are available outside the area, much closer to potential markets.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

The EIS concluded that local social and economic conditions would not be significantly affected by BLM's partial wilderness recommendation. Coal mining could occur in the long term in the

nondesignated portion of the WSA. This would result in significant local economic effects and result in increased Federal revenues.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 108 inputs specifically addressing this WSA were received from 183 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements submitted by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 104 commenters supported wilderness designation for part or all of the WSA and 67 commenters were opposed. Twelve commenters addressed the relative merits of the EIS, but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features and general wilderness values in the WSA. Those commenting in favor of wilderness were almost equally from rural and urban Utah and other states. Of particular concern was the need to preserve wilderness values and protect the area from development.

Those opposing wilderness were concerned that wilderness would preclude public access and mineral exploration and development; they also commented that more wilderness is not needed and that wilderness conflicts with multiple use. Most of those opposing wilderness designation were from rural Utah.

No Federal agencies specifically commented on this WSA.

No comment letters were received on the Final EIS.

There are nine State sections (5,945 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented on inadequacies and suggested corrections in the maps, geology, wildlife, vegetation, and mineral sections. The State noted that compared with other WSAs in the region, Mt. Ellen-Blue Hills WSA is considered to have moderate to high wilderness values and high conflicts. They suggested a boundary change for the recommended 58,480 acre partial wilderness alternative in the Dry Lakes-Nasty Flat area to minimize conflicts with range improvement. The State has independently supported designation of the Gilbert Badlands portion of the WSA as a Research Natural Area.

The WSA is in Wayne and Garfield Counties. The Wayne County Master Planning Report covers the northern part of the WSA. The plan does not identify recommendations at specific locations but recognizes that ". . . outstanding natural landmarks should be preserved as much as possible." However, it also states: "Open spaces should be used for many purposes rather than strictly as wilderness areas."

The Garfield County Master Plan covers the southern part of the WSA. Garfield County has proposed to the Utah Congressional Delegation that 111,053 acres of BLM lands in three WSAs be recommended for wilderness. The County plan recommends that the remaining lands within the County, including the Mt. Ellen-Blue Hills WSA, be retained for multiple uses. The Garfield and Wayne County commissions have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

MT. ELLEN-BLUE HILLS WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (65,804 Acres)	No Action/No Wilderness	All Wilderness (81,726 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved in the designated area which is approximately 83 percent of the WSA. The best wilderness values would be preserved. In the nondesignated area, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 3,001 acres because of coal mining and reservoir construction. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 7,896 acres of the WSA. All of the impact would be in the nondesignated area. Although the bison special feature would benefit from solitude, there would be no additional forage with this alternative. Vehicular use of 5.3 miles of ways and 5 miles of future coal haul roads in the nondesignated portion would be an occasional annoyance that would detract from opportunities for solitude and primitive recreation in the WSA. The Lonesome Beaver and Dandelion Flat Campgrounds would be in the nondesignated area and management conflicts would not occur.	Wilderness values would not be preserved by wilderness designation, and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 4,001 acres of the WSA because of rangeland development projects and coal mining. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 12,260 acres. Most special features including geologic features, endangered and sensitive species, bristlecone pine, and shark teeth would not be significantly affected. Class A scenery would be reduced in quality in the disturbed areas. Bison would benefit from the increased forage. Increased vehicular use of 9.3 miles of ways and future coal roads would be an occasional annoyance that would detract from opportunities for solitude and primitive recreation in the WSA. There would be no conflicts with continued mechanized management and vehicular use of the Lonesome Beaver and Dandelion Flat Campgrounds.	Wilderness designation would preserve wilderness values including naturalness, outstanding opportunities for solitude and primitive recreation and special features. No disturbance is anticipated in the foreseeable future that would affect wilderness values. The bison special feature would not provide additional forage with this alternative. Increased visitor use would be primitive in nature and would be managed so as to not result in loss of wilderness values. Management of the Lonesome Beaver and Dandelion Flat Campgrounds as wilderness would present management conflicts.
Impacts on Air Quality	Impacts on air quality would be essentially the same as with the No Action/No Wilderness Alternative since all of the potential coal surface mining would occur in the nondesignated area.	Existing PSD Class II air quality standards in the WSA or PSD Class I air quality standards in Capitol Reef National Park would be maintained but slight increases in fugitive dust could be expected.	Air quality would not be adversely affected. Emission would remain as at present because surface disturbance would not occur.
Impacts on Geology and Topography	Impacts and conclusions would be the same as for the No Action/No Wilderness Alternative since the coal mining area would be in the nondesignated portion of the WSA.	Topography would be modified by surface mining on 2,825 acres or about 3 percent of the WSA.	No impacts on geology or topography would occur with this alternative because there would not be any surface disturbance.

MT. ELLEN-BLUE HILLS WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (65,804 Acres)	Alternatives: No Action/No Wilderness	Alternatives: All Wilderness (81,726 Acres)
Impacts on Soils	About 3,000 acres of soil would be disturbed as compared to 4,000 acres with the No Action/No Wilderness Alternative. Most of this difference would be because the 1,000 acres of proposed vegetation treatments would not be allowed in the 65,804-acre area. Therefore, soil loss from coal development would be the same as with the No Action/No Wilderness Alternative. About 5,100 more cubic yards of soil per year would be lost than with the All Wilderness Alternative. This would be about a 5-percent increase over present conditions.	Over the long term, soil loss would increase about 7 percent or a maximum of 8,100 cubic yards per year with an unquantified but slight increase in salt production. However, soil loss and salt production would decrease as reclamation occurred.	Soil erosion would remain at present levels. However, the opportunity to reduce soil loss on 1,000 acres would be foregone.
Impacts on Vegetation	Impacts would be similar to those of the No Action/No Wilderness Alternative. About 3,000 acres or 13.5 percent of pinyon-juniper woodland in the WSA would be disturbed and then reclaimed to a natural condition.	Threatened, endangered, or sensitive plant species would not be significantly affected because the viability of populations would be maintained. The 4,000 acres of projected surface disturbance would affect 18 percent of the pinyon-juniper woodland in the WSA. However, 3,000 acres would be reclaimed to a natural condition and vegetation types would not be significantly altered.	Vegetation types and endangered and sensitive plant species would be protected by the All Wilderness Alternative.
Impacts on Water Resources	Surface coal mining in the Wildcat Mesa area could potentially result in slight increases in total dissolved solids and other pollution, but mine plan restrictions would reduce or eliminate such impacts. Up to 187 acre-feet of groundwater per year could be used with coal mining. A proposed livestock reservoir would be allowed.	Surface coal mining in the Wildcat Mesa area could result in slight increases in total dissolved solids and other pollution but mine plan restrictions would reduce or eliminate such impacts. Up to 187 acre-feet of groundwater per year could be used in coal mining.	Wilderness designation would not alter present or future water quality. A proposed livestock reservoir could not be built.

MT. ELLEN-BLUE HILLS WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (65,804 Acres)	No Action/No Wilderness	All Wilderness (81,726 Acres)
Impacts on Mineral and Energy Exploration and Production	Implementation of the Partial Wilderness Alternative would not have a significant adverse effect on mineral and energy resource exploration and production because the coal resource in the WSA would be in the non-designated area and could be developed in the future.	Implementation of the No Action/No Wilderness Alternative would not adversely affect mineral and energy resource exploration and production in this WSA.	Wilderness designation would limit potential exploration and development opportunities for coal resources known to occur in the WSA. Opportunities for production of up to 60 million tons of coal would be foregone. No significant locatable or salable mineral production would be foregone.
Impacts on Wildlife Habitat and Populations	Impacts on habitat and populations of threatened, endangered, or other special status animal species would not be significant. Wildlife species would be destroyed or displaced on 4 percent (3,000 acres) of the WSA during the 30-year life of the projected surface mines.	Impacts on wildlife habitat and populations of threatened, endangered or other special status animal species would not be significant. Implementation of the rangeland and water projects would benefit wildlife by providing additional water, 140 AUMs and forage ecotones. Wildlife species would be destroyed or displaced by coal mining on 4 percent (3,000 acres) of the WSA.	Wilderness designation would preclude 1,000 acres of wildlife improvement projects, but would prevent habitat destruction and provide all species with additional opportunities for solitude.
Impacts on Forest Resources	No significant impacts to forest resources would be expected from this alternative because past use has been light and firewood and fenceposts are readily available outside the WSA.	This alternative would not result in any significant increase in harvest or loss of forest resources in the WSA because access to firewood and fenceposts would not be restricted.	Private harvest of the pinyon-juniper woodland for small amounts of firewood and fenceposts would be precluded. Past use has been light (160 cords of firewood and 200 fenceposts per year). This impact is not significant because of availability of firewood and fenceposts outside the WSA.
Impacts on Livestock Management	This alternative would impact access for livestock management on approximately the same as the All Wilderness Alternative. In addition strip mining for coal would disrupt livestock grazing as described for the No Action/No Wilderness Alternative. The proposed reservoir would not be allowed to improve livestock distribution.	Possible strip mining for coal would disrupt livestock grazing during the life of the project. However, livestock forage would increase over the long term with this alternative. A proposed reservoir could be constructed to improve livestock distribution.	Restrictions on access to 9.3 miles of ways would not significantly affect livestock management because 3.5 miles of roads would be cherry-stemmed and would remain available for unrestricted access and because there is very little use of vehicles for livestock management.

MT. ELLEN-BLUE HILLS WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (65,804 Acres)	Alternatives: No Action/No Wilderness	Alternatives: All Wilderness (81,726 Acres)
Impacts on Visual Resources	Impacts on visual resources would be significant in disturbed areas. Approximately 3,000 acres or 4 percent of the WSA as well as surrounding areas would be affected by disturbance.	Significant visual impacts would occur on 5 percent (4,001 acres) of the WSA and in areas surrounding the disturbed lands.	Visual resources would be preserved. There would be no change to the visual resources within the WSA as a result of this alternative because there would not be any surface disturbance.
Impacts on Cultural Resources	Impacts would be similar to those of the No Action/No Wilderness Alternative because surface mining for coal would occur. Overall, cultural resources would not be significantly affected.	Significant impacts on cultural resources would not occur with this alternative because of low site densities in the WSA and mitigation required by law.	The overall impact of wilderness designation on cultural resources would be positive because surface disturbance and ORV use would be prevented.
Impacts on Recreation	Primitive recreational opportunities would be protected on approximately 80 percent of the WSA. Primitive recreation opportunities would be reduced in quality or lost on 3,000 acres due to surface coal mining over the long term. Motorized recreation opportunities would continue in the nondesignated area involving 5.3 miles of vehicular ways. Lonesome Beaver and Dandelion Flat Campgrounds would not be in the designated area and use and service would continue as at present.	Primitive recreation opportunities would be reduced in quality or lost on 1,000 acres of pinyon-juniper chaining in the short term and 3,000 acres due to surface coal mining in the long term. Both motorized and primitive recreation use would increase. Two developed campgrounds would continue to be used and maintained by motorized and mechanized means. Service and use of the campgrounds would not be affected.	This alternative would benefit primitive recreation by eliminating surface-disturbing activities and increasing management attention and recognition of primitive recreational values. ORV use on 9.3 miles of ways would be precluded. Mechanized maintenance of Lonesome Beaver and Dandelion Flat Campgrounds would be eliminated which would create administrative problems and disrupt historical recreation use of the area.
Impacts on Economic Conditions	Over the short term, this alternative would not affect local economic conditions. Long-term impacts would be about the same as with the No Action/No Wilderness Alternative because coal development could occur.	Short-term economic conditions would not be affected. Long-term conditions would be affected by an increase of about 200 workers. This would represent an approximate 5-percent increase in the projected work force in Wayne and Garfield Counties. This would result in significant beneficial and adverse impacts on local economic conditions.	Over the short term, wilderness designation would not affect local economic conditions. However, there would be significant beneficial and adverse impacts to long-term economic conditions because coal mining in the Wildcat Mesa and 200 potential jobs would be foregone.

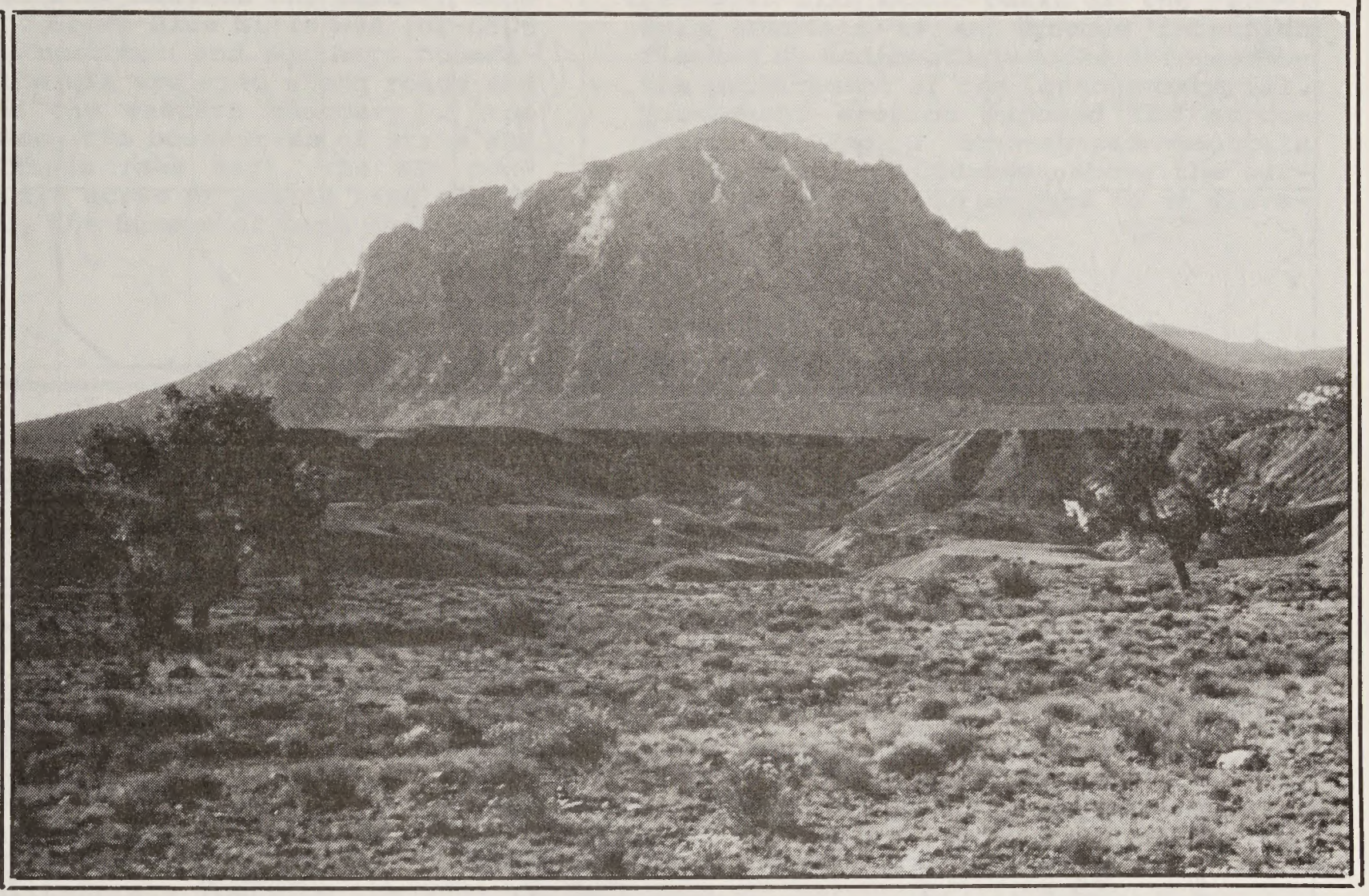
MT. ELLEN-BLUE HILLS WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 29 S., R. 9 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 29 S., R. 9 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 30 S., R. 9 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 30 S., R. 10 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 30 S., R. 10 E., Sec. 36	726.80		State	State	No	Exchange		$2,000
T. 31 S., R. 10 E., Sec. 2	872.12		State	State	No	Exchange		$2,000
T. 28 S., R. 9 E., Sec. 32	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Bull Mountain WSA



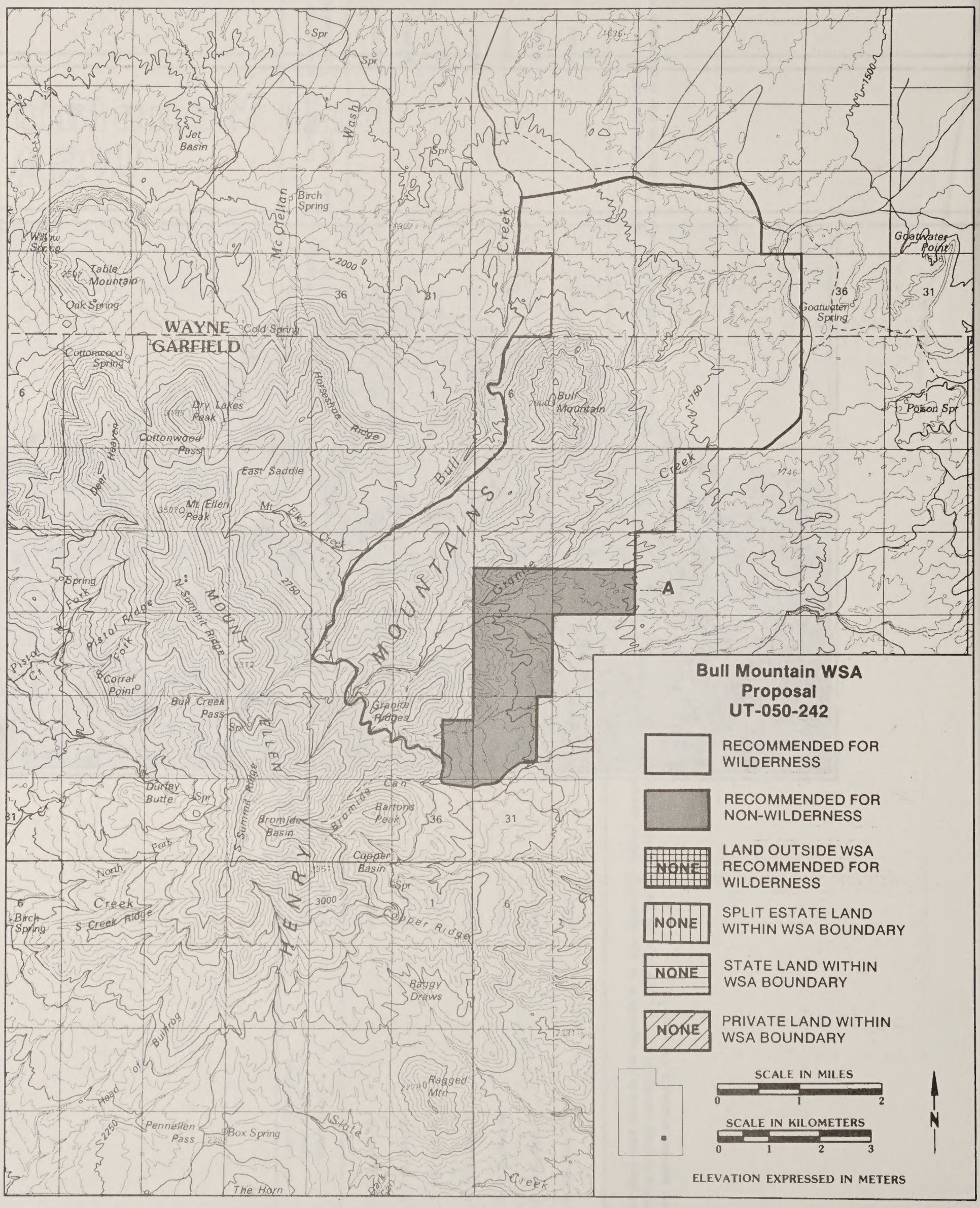
BULL MOUNTAIN WSA

R. 10 E. R. 11 E.

T. 30 S.

T. 31 S.

T. 32 S.



Bull Mountain WSA Proposal UT-050-242

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- NONE — STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

N

ELEVATION EXPRESSED IN METERS

October 1991

BULL MOUNTAIN WILDERNESS STUDY AREA

1. THE STUDY AREA: 13,620 acres

The Bull Mountain Wilderness Study Area (WSA) (UT-050-242) is in eastern Garfield and Wayne Counties, about 13 miles south of Hanksville, Utah. The study area extends 8 miles from north to south and 4 miles from east to west. The western boundary of the WSA is along a dirt road which also defines the eastern edge of the Mt. Ellen-Blue Hills WSA (UT-050-238). The northern and southern boundaries of the WSA are also along roads and ways, and the eastern boundary of the WSA is along the boundaries of State and private lands (see Map). The WSA contains 13,620 acres of public land administered by the Bureau of Land Management (BLM).

Non-Federal lands are not included in the WSA (see Table 1). The area recommended for wilderness designation is the northern portion of the WSA, which includes Bull Mountain.

The Bull Mountain WSA is in the Henry Mountains, well known since the late 1870s for classical studies in American geology. Like other peaks in the range, Bull Mountain is an igneous intrusion flanked by sedimentary rocks deformed by the emplacement of the igneous material. Subsequent erosion exposed the structure, leaving a dome-shaped mountain rising nearly 3,000 feet above the surrounding plains and benches to an elevation of 9,187 feet.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	13,620
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	13,620
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	11,800
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	11,800
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	1,820
Split-Estate	0
Total BLM land not recommended for wilderness	1,820
In-holdings (State, Private)	0

Source: BLM File Data

Shallow canyons radiate from the apex of the mountain, but there are no perennial streams in the WSA. Vegetation consists of shrubs and grasses in the lower portions of the area and pinyon-juniper woodland in the higher elevations with scattered stands of aspen, fir, and pine.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness where 11,800 acres would be designated as wilderness and the remaining 1,820 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
11,800 acres
(recommended for wilderness)
1,820 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 11,800 acres as wilderness and to release the remaining 1,820 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

All of the recommended portion of the WSA is natural and has outstanding opportunities for solitude and about 79 percent of the area has outstanding opportunities for primitive recreation. The granite-cliffed dome of Bull Mountain is the northeast buttress of the Henry Mountains and a landmark for visitors to the surrounding canyons and deserts. The mountain's golden cliffs and high ridges dominate the western half of the unit, while low-lying badlands and rims characterize the eastern half. It is the headwaters for Granite Creek and Beaver Creeks and provides crucial summer range for roaming deer and bison. There are natural stands of ponderosa pine, Douglas fir, aspen, subalpine fir, and the unique bristlecone pine. Scenic values are exceptional including the barren cliffs and badlands that cover large areas and provide so much diversity throughout the WSA.

The 1,820 acre portion of the WSA that is not recommended includes a 550 acre chaining and seeding, 1 mile of way, 1 mile of pipeline, and a 0.50 mile of fence. Wilderness values in this portion of the WSA are of a lower quality than in areas where outstanding opportunities for solitude and/or primitive recreation exist and where there are fewer intrusions.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Most of the WSA is in a natural condition; 13,060 acres within the WSA meet the naturalness standard set by the Wilderness Act and 560 acres do not meet the standards. Imprints of man include 3 miles of way, one spring, 1.25 miles of pipeline, 0.5 mile of fence, and 550 acres of pinyon-juniper chaining and seeding. All of the pinyon-juniper chaining, 1 mile of way, 1 mile of pipeline, and the 0.50 mile of fence are in that portion of the unit which was inadvertently included within the WSA boundary in BLM's 1980 Wilderness Inventory Decision.

B. Solitude

The quality of the opportunities for finding solitude are outstanding throughout the WSA.

Opportunities for recreationists to find solitude (i.e., a secluded spot away from others) within the WSA are influenced by size, topography, vegetation, and the absence of distracting sights and sounds. The WSA is large enough, at

13,620 acres, to provide opportunities for solitude. The study area consists of steep slopes along Wickiup Ridge leading to Bull Mountain, which tend to concentrate visitor use into travel routes. Several small canyons are found on the eastern side of the WSA. The pinyon-juniper vegetation significantly screens recreationists from each other. No outside sights and sounds occur that would have a significant adverse effect on one's ability to find solitude in the WSA. On Bull Mountain, views of the Henry Mountains and the surrounding deserts also enhance the feeling of solitude.

C. Primitive and Unconfined Recreation

The entire 13,620-acre WSA was determined, on the basis of quality and diversity, to have outstanding opportunities for primitive and unconfined recreation.

Opportunities for primitive and unconfined recreation were evaluated by considering miles of potential hiking routes in relation to the WSA's size, the various recreational opportunities present, and an evaluation of the quality of these opportunities.

D. Special Features

The summit of Bull Mountain provides excellent opportunities for geologic study. Excellent views of the desert canyon country and the other peaks in the Henry Mountains are visible from the summit.

Portions of the WSA are range for the Henry Mountain bison herd. Cougar, which is a wildlife species associated with wilderness, inhabit the WSA. Peregrine falcon, listed as an endangered species and seven other animal species that are considered sensitive, may inhabit or use the WSA.

A small population of bristlecone pine are found with mixed conifers in the southwestern portion of the WSA. One plant species (Sclerocactus wrightiae), which is listed as endangered, and three plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Approximately 79 percent (10,790 acres) of the WSA is rated outstanding for scenic quality.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Arizona pine forest (2,120 acres) and juniper-pinyon woodland (11,500 acres). The PNV in the WSA is represented in the NWPS nationally and in Utah and in BLM study areas both in and outside of Utah. Arizona pine forest PNV is not represented in the NWPS in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Bull Mountain WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Arizona Pine Forest	3	26,300	8	17,790
Juniper-Pinyon Woodland	11	1,401,745	84	2,132,505
UTAH (COLORADO PLATEAU PROVINCE)				
Arizona Pine Forest	0	0	8	17,790
Juniper-Pinyon Woodland	1	26,000	53	1,694,698

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,246,055
Provo-Orem, Utah	11	721,793	90	2,773,248

Source: BLM File Data.

As of January, 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah, Arizona, and Colorado. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]) and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS). In southeastern Utah, however, there are all or part of two designated wilderness areas totaling 83,630 acres. If designated, a Bull Mountain Wilderness would supplement wilderness areas in this region.

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness designation can be managed as wilderness to preserve values now present in the area. Resource and land conflicts are not now a problem in the WSA and are not anticipated to be in the future. There are presently no oil and gas leases in the WSA and no known deposits of any leasable minerals and there are no active drilling, mining, or exploration activities for any leasable minerals. All of the 39 mining claims in the WSA are in the area recommended for wilderness, but the potential for development is low because there are no known deposits of locatable minerals in the WSA.

There are no State-owned sections included in the WSA. Livestock grazing could continue as at present, requiring little or no change in management.

The area not recommended as wilderness would not be managed as wilderness. However, maintenance and use of 1 mile of way, 1 mile of pipeline, a 0.50 mile of fence, and 550 acres of pinyon-jumper chaining and seeding would create manageability problems.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Bull Mountain WSA (USGS Bulletin 1751-B, Russell F. Dubiel, et al., 1988). The report indicates that there are no identified mineral resources in the WSA. The northern part of the area has a high potential for undiscovered gypsum resources, and the entire WSA has a low resource potential for undiscovered copper, lead, zinc, molybdenum, silver, gold, uranium and vanadium, coal, oil and gas, and geothermal resources.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 42 inputs specifically addressing this WSA were received from 96 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statement by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 28 commenters supported wilderness designation for part or all of the WSA, while 62 commenters were opposed. Six commenters addressed the relative merits of the EIS, but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values in the WSA and noted that designation would complement the adjacent Mt. Ellen-Blue Hills WSA. The majority of those commenting in favor of wilderness were from other states. Of particular concern was the need to protect wildlife and wildlife habitat.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict public access, stated that designation is unnecessary to protect the area, and that wilderness would be incompatible with multiple use. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, The National Park Service (NPS) and the USBM, commented on the Draft EIS for this WSA. The Federal agencies did not take a position regarding designation or nondesignation of the WSA. The NPS stated that the wildlife improvements such as chainings and reseedings can be done with fire, which is a natural component of the wilds. The USBM noted that the BLM's Final EIS should include the findings of the USGS and USBM minerals investigations and those findings would be available in November 1988. These findings have been incorporated into the Final EIS and study report. USBM also stated that BLM underrated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are no State in-holdings in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. Specific State comments on the Draft EIS dealt with inadequacies of the geology discussion, i.e., details necessary to assess economic potential for this WSA. The State ranks the WSA as having low wilderness quality and low conflicts in relation to other WSAs in the region. The State commented that BLM's proposed 11,800-acre wilderness alternative would

not result in major conflicts except to wildlife. There would be conflicts with wildlife because 330 acres of vegetation manipulations for bison and mule deer would not be allowed with BLM's proposed action.

The WSA is in eastern Garfield and Wayne Counties. The Wayne County Master Report does not address this area specifically, but generally recommends that ". . . open spaces be used for many purposes rather than strictly as wilderness areas." It also states ". . . Outstanding Natural Landmarks should be preserved as much as possible." The Wayne County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designaton of BLM lands in Utah. About 3,500 acres of the WSA are in Wayne County.

The Garfield County Master Plan covers the southern 10,120 acres of the WSA. Garfield County has proposed to the Utah Congressional Delegation that 111,053 acres of BLM lands in three WSAs and 31,600 acres in one FS unit be recommended for wilderness. The County plan recommends that the remaining lands within the County, including the Bull Mountain WSA, be retained for multiple uses. The Garfield County Commission also has endorsed the Consolidated Local Government Response to Wilderness which opposes wilderness designation of BLM lands in Utah.

BULL MOUNTAIN WSA

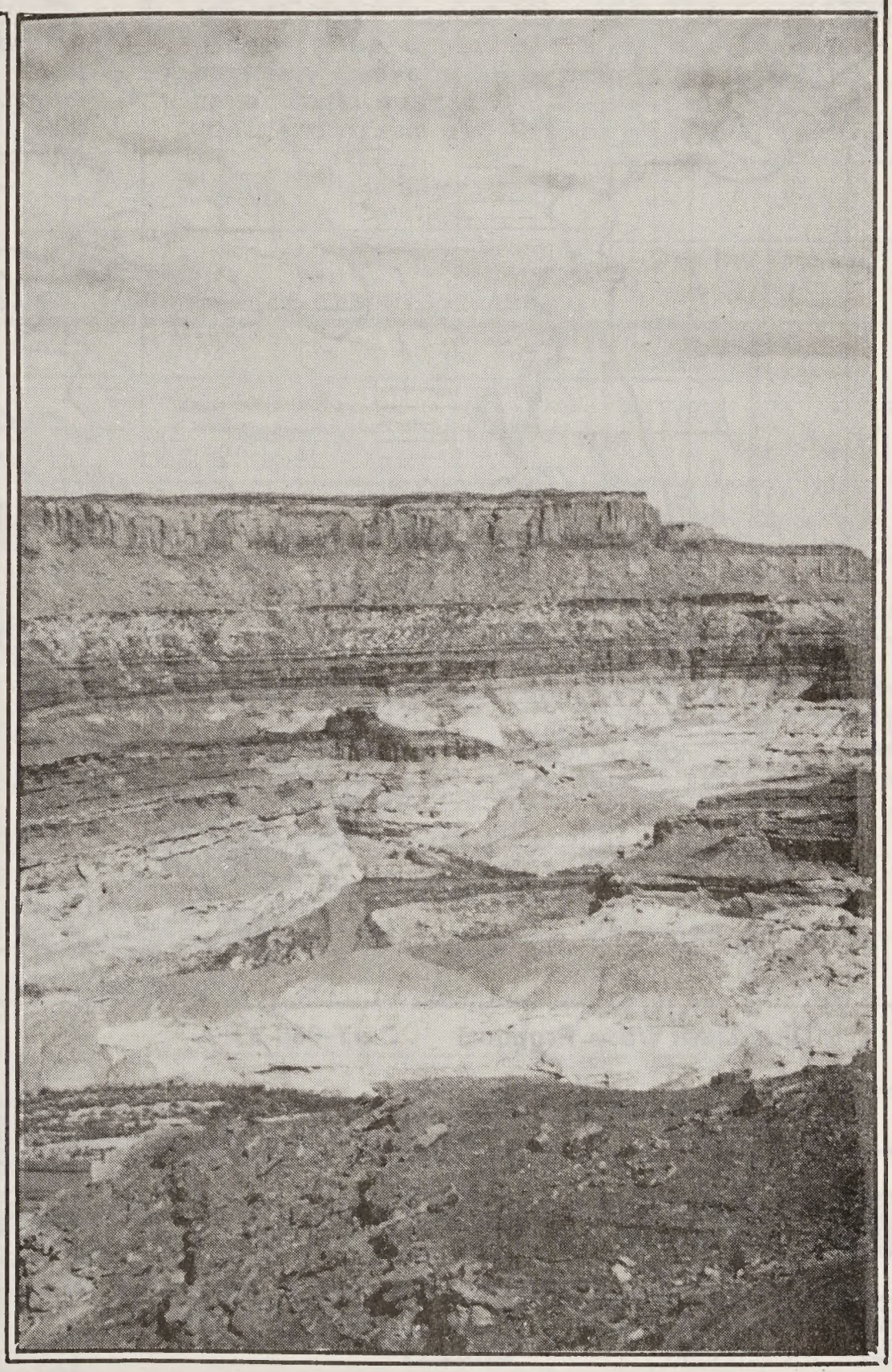
Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (11,800 Acres)	Alternatives No Action/No Wilderness	All Wilderness (13,620 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved in the designated area involving approximately 87 percent of the WSA. No disturbance is anticipated in the foreseeable future that would affect wilderness values.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on up to 550 acres because of a chaining project and opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 600 acres. Special features including geologic features and special status plant and animal species would not be significantly affected. The special features that would be affected are Class A scenery which would be reduced in quality on 600 acres and bison which would benefit from the vegetation treatment. Continued vehicular use of ways would be an occasional annoyance that would detract from opportunities for solitude and primitive recreation in the WSA.	Wilderness designation would preserve wilderness values of naturalness; outstanding opportunities for solitude and primitive recreation; and special features including Class A scenery, bristlecone pine, geologic features, special status plant and animal species, and wildlife species associated with wilderness.
Impacts on Soils	No surface disturbance is projected with this alternative. Therefore, impacts would be essentially the same as with the All Wilderness Alternative.	There would be a temporary (2 to 3 year) increase in soil loss from the 550 acres disturbed by chaining and seeding pinyon-juniper woodland. This increase would be approximately 780 cubic-yards per year or 8.3 percent above that which now occurs in the WSA.	The soil resource could slightly benefit under the alternative because surface-disturbing activities would be precluded. The 550-acre chaining and seeding and associated short term increases in erosion would not occur.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (11,800 Acres)	Alternatives: No Action/No Wilderness	Alternatives: All Wilderness (13,620 Acres)
Impacts on Vegetation	Since the 550-acre pinyon-juniper woodland chaining would be precluded with this alternative, there would be no change or impact to the vegetation types and special status plant species with this alternative.	Impacts on special status plant species would not be significant. The 600 acres of projected surface disturbance would affect about 10 percent of the pinyon-juniper woodland in the WSA. Therefore, impacts on vegetation types would not be significant.	The vegetation types and special status plant species would be protected by this alternative.
Impacts on Wildlife Habitat and Populations	Since the 550 acres of pinyon-juniper woodland chaining would be in the designated portion of the WSA, the impacts and conclusions would be essentially the same as with the All Wilderness Alternative.	Impacts on habitat and populations of threatened, endangered, or special status animal species would not be significant because of required mitigation. Implementation of the wildlife and rangeland projects would provide additional forage and ecotones for many species. Approximately 82 AUMs of additional forage would be provided for bison.	Wildlife populations would be provided with solitude over the entire WSA but the opportunities to provide ecotones and an additional 82 AUMs of bison forage through chaining and seeding of 550 acres of pinyon-juniper woodland would be foregone.
Impacts on Livestock Management	Because all 3 miles of ways would be in the designated area, impacts would be about the same as with the All Wilderness Alternative.	Livestock management and grazing levels would not be affected by this alternative.	Restrictions on vehicle use of 3 miles of ways would cause inconvenience to permittees and increase the costs and time to manage livestock on two allotments.
Impacts on Visual Resources	Visual resources in the WSA would be preserved.	Approximately 5.6 percent (600 acres) of the Class A scenery in the WSA would be degraded and VRM Class II management objectives would not be met on the disturbed or surrounding areas.	Wilderness designation would preserve the existing scenic values within the WSA.

Dirty Devil WSA



DIRTY DEVIL WSA

R. 12 E. R. 13 E. R. 14 E.

T. 28 S.

T. 29 S.

T. 30 S.

T. 31 S.

Beaver Wash Canyon ACEC

Dirty Devil WSA Proposal UT-050-236A

- RECOMMENDED FOR WILDERNESS
- NONE — RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

N

SCALE IN MILES 0 1 2

SCALE IN KILOMETERS 0 1 2 3

ELEVATION EXPRESSED IN METERS

October 1991

DIRTY DEVIL WILDERNESS STUDY AREA

1. THE STUDY AREA: 61,000 acres

The Dirty Devil Wilderness Study Area (WSA) (UT-050-236A) is in eastern Wayne County, about 5 miles east of Hanksville, Utah. The WSA is an irregularly shaped unit extending about 19 miles from northwest to southeast and as much as 10 miles from east to west. The southeast corner of the WSA adjoins the French Springs-Happy Canyon WSA (UT-050-236B). The major part of the boundary is along terrain features and roads. In a few places State sections form the boundary (see Map). The WSA contains 61,000 acres of public land administered by the Bureau of Land Management (BLM).

Five sections (3,195 acres) of State land are inheld in the WSA (see Table 1).

The study area includes a portion of the canyon of the Dirty Devil River along the western side of the WSA and several tributary canyons as much as 500 feet deep. Some of the canyons are more than 10 miles long, and are bounded by sheer cliffs with large overhangs in several places. The upper parts of the benches between canyons are mostly undulating bare rock surfaces. Elevations in the WSA range from 4,000 feet to 4,800 feet.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	61,000
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,195
Total	64,195
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	61,000
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	61,000
In-holdings (State, private)	3,195
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

About 70 percent of the study area is barren sand and rock, with sparse blackbrush and other desert shrubs and some pinyon-juniper, saltbush, and scrub oak.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no action (no wilderness) alternative.

2. RECOMMENDATION AND RATIONALE:
61,000 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

The recommendation further applies to any in-holdings acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides information on acquisitions.

All of the WSA is in a natural condition and about 80 percent has outstanding opportunities for solitude and primitive recreation. The diverse individuality of special features in the WSA are exceptional. Designation would not preclude future in-situ recovery of available tar sand in the Tar Sand Triangle Special Tar Sand Area. No conflicts exist with other land uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All of the Dirty Devil WSA is in a natural condition. Sheer cliffs of the Navajo and Wingate formations, colorful sediments, sinuous tributary canyons, riparian vegetation along the Dirty Devil River and Beaver Wash Canyon and unbridled erosion reinforce the feeling of naturalness. The character of this area, largely remote and inaccessible, has prevented it from being extensively disturbed. Eighteen miles of post-FLPMA vehicular ways with numerous drill pad sites in the southern end of the WSA along the Dirty Devil River, on Sams Box Mesa, and in Twin Corral Canyons were substantially unnoticeable at the time of the inventory, in 1980. They are in the process of natural rehabilitation. A 12-mile road authorized in 1979-80 in the Bull Pasture area is successfully rehabilitating. No other surface disturbances have occurred and naturalness has not been affected since the BLM's Intensive Wilderness Inventory.

B. Solitude

Overall, characteristics in the WSA meet the standards for solitude set by the Wilderness Act on 49,000 acres (80 percent of the WSA). Opportunities for solitude on the remaining 12,000 acres do not meet the standards.

The large size of the WSA and the numerous deep, steep-walled, twisting canyons offer outstanding opportunities for solitude. The low recreational use of the area enhances opportunities for solitude.

On top of the mesas, where vegetation is low-growing and sparse, opportunities for solitude are less than outstanding.

C. Primitive and Unconfined Recreation

Opportunities for primitive and unconfined recreation meet the standards set by the Wilderness Act on 49,000 acres (80 percent of the WSA) and do not meet the standards on 12,000 acres.

The Dirty Devil WSA has diverse recreational opportunities, many of which are of outstanding quality. These opportunities include hiking, backpacking, horseback riding, photography, nature study, camping, scenic sightseeing, and viewing geologic formations and archaeological structures. Numerous hiking routes,

totaling more than 100 miles, allow for extended trips. Many camping sites in the canyons offer shelter under rock overhangs. The slickrock areas offer excellent opportunities for sightseeing and photography. Present recreational use is low due to the remote location and limited accessibility.

D. Special Features

The Dirty Devil River, a Nationwide Wild and Scenic Inventory river segment, is the major perennial water source in the WSA. Approximately 30 miles of the river flow through the WSA.

Beavers have constructed dams in Beaver Wash Canyon from desert woody plants (e.g., pinyon, juniper, sagebrush). Petrified wood occurs in several canyons. Prehistoric rock art is found in Robbers Roost Canyon. Generally spectacular canyon scenery including ephemeral waterfalls in places is present throughout the WSA. Robbers Roost Canyon is reputed to have been one of the major hideouts of the famous outlaw, Butch Cassidy. The diversity and uniqueness of these features give the WSA exceptional special features.

Approximately 96 percent (58,440 acres) of the WSA is rated outstanding (Class A) for scenic quality.

The endangered peregrine falcon and black-footed ferret may occur in the WSA. The WSA may have desert bighorn sheep, which is a species associated with wilderness. Six other animal species that are considered sensitive may inhabit the WSA.

Refer to Appendix 4 and the Affected Environment, Wildlife Including Special Status Species section of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (61,000 acres), which is represented in the NWPS in Utah and is well represented nationally in the NWPS and in other BLM wilderness study areas.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Dirty Devil WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and Arizona and Colorado, the adjacent states nearest the WSA.

A Dirty Devil Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, where there are just two established wildernesses, totaling 70,751 acres.

There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the U.S. Forest Service (FS).

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,475	84	2,083,005
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,645,198

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	10	1,099,962	78	22,198,675
Provo-Orem, Utah	11	721,793	90	2,725,868

Source: BLM File Data.

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be effectively managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing would continue with little or no effect on wilderness values. Even though there are 11,250 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 4,360 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb only small areas (approximately 16 acres) following wilderness designation.

The presence of five State sections (3,195 acres) scattered through the wilderness could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. All of the in-held State sections are leased for oil, gas and hydrocarbons. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State lands could reduce wilderness values in small parts of the recommended wilderness.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS), and the U.S. Bureau of Mines (USBM), examined the WSA for mineral and energy resource potential and prepared a report and map (USGS Miscellaneous Field Studies Map MF 1754-A, R. F. Dubiel, et al., 1985). The report indicates that the WSA has a moderate potential for oil and gas. The potential for tar sand resources is unknown. The study area

appears to have moderate potential for undiscovered uranium resources. The potential is low for metals other than uranium, however.

The WSA has some potential for materials that could be used for construction purposes. Sand and gravel are present in terrace deposits and could be sources of building stone. Larger and more accessible deposits of the same kind of materials are available outside the WSA, closer to markets.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With implementation of BLM's all wilderness recommendation, restrictions would be placed on the use of resources such as uranium. Therefore, there could be slight losses in local income and Federal and local revenues as compared to conditions without wilderness designation.

An unquantified but potentially significant economic impact could result in Emery, Garfield, Sevier, and Wayne Counties, if water developments are restricted upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 96 inputs specifically addressing this WSA were received from 348 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 322 commenters supported wilderness designation for part or all of the WSA, while 19 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness stated that wilderness designation of the WSA would protect the wilderness values there, preserve the area for future generations, and add an ecosystem to the NWPS. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and harm State and local economies. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the National Park Service (NPS) and USBM commented on the Draft EIS. The NPS concurred with the proposed alternative and stressed that the analysis of impacts associated with development of the Tar Sand Triangle should be expanded. The USBM did not take a position on wilderness designation for the WSA, but stated that the BLM had underestimated the petroleum potential of the WSA and overestimated the uranium potential.

No comment letters were received on the Final EIS.

There are five State sections (3,195 acres) of State land in the WSA. In commenting on the Draft EIS, the State of Utah noted that BLM's tar sand rating for the WSA was probably too high and that the presence of tar sand in the WSA is conjectural. The State also pointed out that drilling results indicate that the uranium potential of the WSA is limited, but the uranium potential has not been fully evaluated. According to the State, the Dirty Devil WSA is ranked first for wilderness quality, but there are conflicts within the region.

Reported conflicts would be with tar sand and water development, but more

favorable areas for tar sand may exist elsewhere. The State noted that there are potential conflicts with water development and that gas company reports give the WSA a high potential rating for hydrocarbons.

The WSA is entirely within Wayne County. The Wayne County Master Planning Project Final Report does not identify recommendations at specific locations. The plan recognizes that ". . . outstanding natural landmarks should be preserved as much as possible." However, it also states that "Open spaces should be used for many purposes rather than strictly as wilderness areas." The Wayne County Commission is opposed to wilderness designation for this WSA because of oil and gas potential, the need to provide access for tourism and because there are large deposits of tar sand adjacent to the area. The County Commission also has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

DIRTY DEVIL WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (61,000 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve wilderness values overall in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be lost on 22 acres because of uranium exploration and development and construction of roads to in-held State lands, and would be indirectly reduced in quality on up to an additional 9,760 acres. Special features, including Class A scenery, cultural values, petrified wood, special status species, wildlife associated with wilderness, and perennial waters including the Dirty Devil River, would be preserved overall. Class A scenery would be reduced in quality in the disturbed areas.	Wilderness values would not be preserved by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 61 acres because of uranium exploration and development and construction of roads to in-held State lands, and indirectly reduced in quality on up to 30,500 acres. Some special features, including petrified wood, cultural values, special status species, and wildlife associated with wilderness ,would not be significantly affected. Class A scenery would be reduced in quality in the disturbed areas. Long-term changes of water flow in the Dirty Devil River would significantly reduce the quality of opportunities for primitive recreation.
Impacts on Water Resources	In the long term, groundwater quality could be affected by tar sand development outside the WSA. Existing water rights and uses would not be affected, but future water diversions and new consumptive uses in the Dirty Devil River system upstream of the WSA in Sevier, Wayne, Garfield, and Emery Counties may be hampered or restricted in order to protect wilderness values in the WSA.	In the long term, tar sand development on the adjacent Tar Sand Triangle STSA and potential extraction of water from the WSA would reduce the quality of groundwater, reduce the flow in the Dirty Devil River, reduce the salinity in the Colorado River, and compete with other potential consumptive water uses in the Dirty Devil River system.
Impacts on Mineral and Energy Exploration and Production	The potential for production of an unknown amount of uranium oxide would be foregone.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing and mining claim location would continue and developments could be completed without wilderness protection measures.
Impacts on Livestock Management	Restrictions on access would result in inconvenience and slight increases in management costs to three permittees.	This alternative would not adversely affect livestock management in the WSA because management techniques and access would remain as at present.
Impacts on Economic Conditions	In the long term, major beneficial or adverse impacts on economic conditions from uranium development or water consumptive projects upstream of the WSA on the Dirty Devil River may not occur.	Existing and potential future economic conditions would not be affected. Major economic developments requiring consumptive water use would not be affected.

DIRTY DEVIL WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

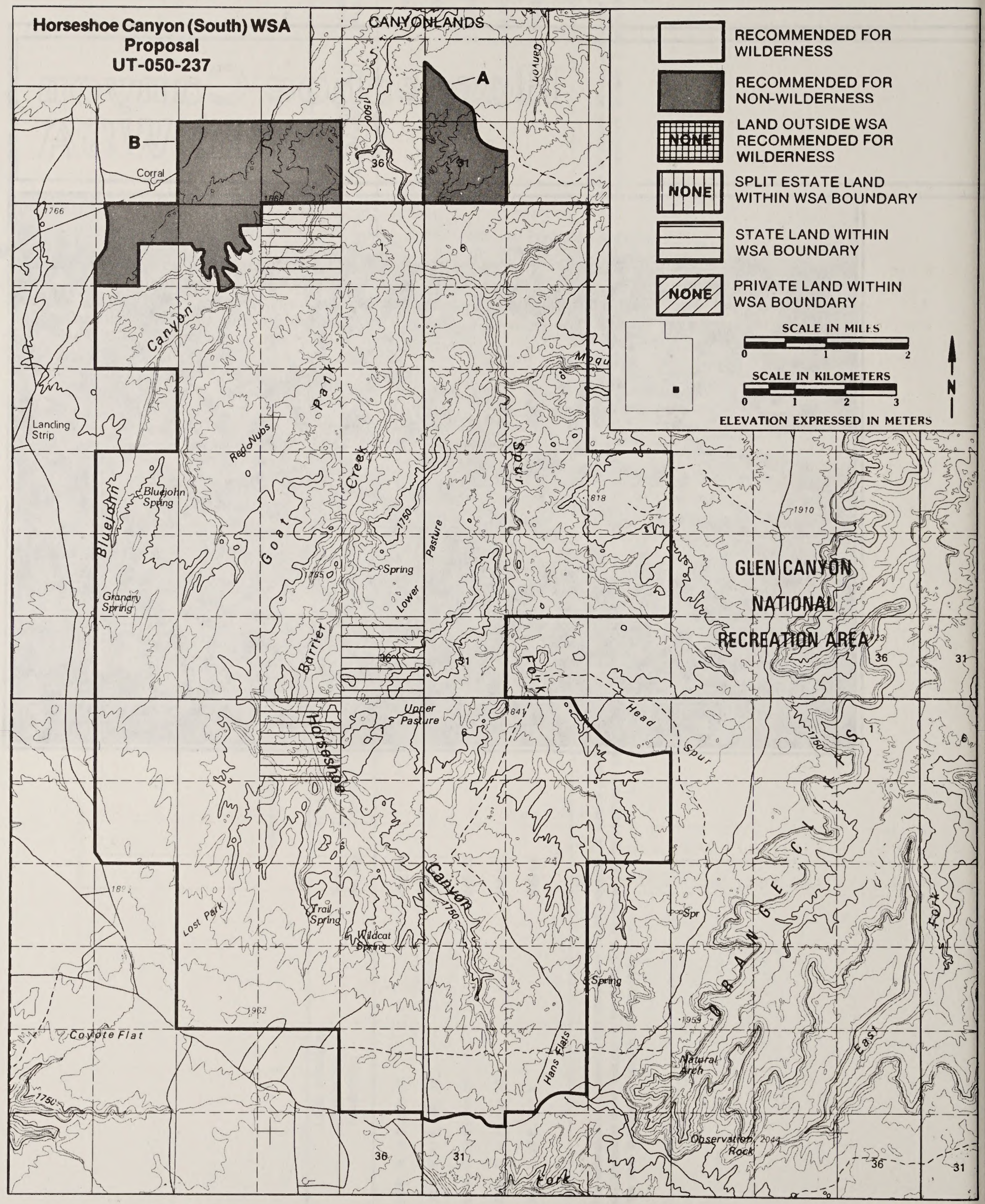
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (if Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 28 S., R. 13 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 29 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 29 S., R. 13 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 29 S., R. 14 E., Sec. 32	638.96		State	State	No	Exchange		$2,000
T. 30 S., R. 13 E., Sec. 2	635.84		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Horseshoe Canyon (South) WSA



HORSESHOE CANYON (SOUTH) WSA



T. 28 S.

T. 29 S.

R. 15 E.

R. 16 E.

October 1991

HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

1. THE STUDY AREA: 38,800 acres

The Horseshoe Canyon (South) Wilderness Study Area (WSA) (UT-050-237) is in northeastern Wayne County, about 24 miles east of Hanksville, Utah. The unit is about 12 miles long, from north to south, and 7 miles wide, east to west. The WSA is contiguous with the Glen Canyon National Recreation Area (GCNRA) for about 10 miles on the east. Approximately 3 miles of the southern boundary is contiguous with the French Spring-Happy Canyon WSA (UT-050-236B). The western and northern boundaries of the WSA are defined by section lines and short road segments (see Map). The WSA contains 38,800 acres of public land administered by the Bureau of Land Management (BLM).

Three State sections (1,922 acres) are inheld in the WSA and are in the portion recommended for wilderness designation (see Table 1).

Three canyons tributary to Horseshoe Canyon are in the WSA. The canyons are from a few feet to 0.5 mile wide; are as much as 600 feet deep; and are characterized by a wide range of colors, sheer walls, and many large overhangs. The canyons converge in the northern portion of the WSA to form Horseshoe Canyon. Weathered sandstone benches, covered in places by grassy parks, separate the canyons. Buttes, domes, and sand dunes are also found in the WSA. Elevations in the study area range from 5,800 feet to 6,200 feet.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	38,800
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,922
Total	40,722
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	36,000
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	36,000
In-holdings (State, private)	1,922
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	2,800
Split-Estate	0
Total BLM land not recommended for wilderness	2,800
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Pinyon-juniper, desert grass, and blackbrush are the dominant vegetative types, but about a third of the total surface area is bare rock or sand.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Four alternatives were analyzed in the EIS: a partial wilderness alternative where 36,000 acres would be designated as wilderness and the remaining 2,800 acres would be released for uses other than wilderness, which is the recommendation in this report; a no action (no wilderness) alternative; an all wilderness alternative; and a smaller partial wilderness alternative where 28,700 acres would be designated as wilderness.

2. RECOMMENDATION AND RATIONALE:
36,000 acres
(recommended for wilderness)
2,800 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 36,000 acres as wilderness and to release the remaining 2,800 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition of inholdings and split-estate minerals.

All of the recommended portion is in a natural condition and has outstanding opportunities for solitude. About 79 percent has outstanding opportunities for primitive recreation.

Most of the WSA is in a natural condition. Horseshoe Canyon is a tangle of colorful entrenched canyons, bowls, alcoves, buttes, domes, sand dunes, potholes, pour-offs, plunge pools, and mesas. The WSA contains the headwaters of three ephemeral creeks (Barrier, Bluejohn, and Spur Creeks). The canyons reach depths of up to 600 feet and are characterized by a wide range of colors and sheer rock faces. The central portion is also characterized by grassy parks and large expanses of slickrock. Portions along the south and southeast boundary, above the canyons, have rolling hills with pinyon trees, shrubs and grasses.

The majority (2,500 acres) in Areas A and B of the WSA not recommended for wilderness designation lack outstanding opportunities for solitude as well as primitive and unconfined recreation. Part of Area A is adjacent to heavily used dirt roads and corrals.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

Human intrusions, all of which are judged to be substantially unnoticeable, consist of 2 miles of fence, three corrals, one livestock reservoir, two drill sites, six improved springs, and 23 miles of ways in various stages of natural rehabilitation.

B. Solitude

Opportunities for solitude on 36,300 acres are outstanding in terms of the standards set by the Wilderness Act. The opportunities on the remaining 2,500 acres, all in the northern portion of the WSA, are considered as less than outstanding due to the lack of screening by terrain and vegetation.

The numerous steep-walled, winding canyons provide screening that substantially contributes to opportunities for solitude. Scattered clusters of pinyon-juniper vegetation on the mesas above the canyons screen visitors from each other on the periphery of the WSA. No sights and sounds occur outside the WSA

to adversely affect opportunities for solitude. The large size of the area also contributes to spatial screening.

C. Primitive and Unconfined Recreation

Overall, the WSA offers outstanding opportunities for a variety of primitive and unconfined types of recreation that meet the standards set by the Wilderness Act on approximately 28,400 acres. Opportunities on the remaining 10,400 acres are less than outstanding due to the absence of recreational features.

The WSA has opportunities for 11 recreational activities. Because of the numerous potential campsites, rugged and colorful canyons, caves, slickrock areas, contrasting vegetation types, springs, and numerous archaeological sites, seven opportunities were rated outstanding. These include backpacking; camping; horseback riding; photography; and archaeological, geological, and scenic sightseeing.

Opportunities for primitive recreation are less exceptional in the rolling pinyon-juniper vegetated portions along the southern and southwestern margins of the WSA.

D. Special Features

Approximately 94 percent (36,500 acres) of the WSA is rated outstanding for scenic quality.

Cowboy Cave, an archaeological site near Spur Fork Canyon, contains some of the richest and oldest paleontological remains in the State of Utah. Underlying the cultural remains in the cave is a fairly heavy dung deposit left by mammoth, bison, horse, camel, and sloth. The mammoth is further represented by the tips of two juvenile tusks. The dung was radiocarbon dated to between 11,000 and 13,000 years ago (9,000 to 11,000 B.C.).

The WSA was frequented by Butch Cassidy and the Wild Bunch. Several cabins used by the outlaws are on the edge of the WSA. The diversity and uniqueness of these features enhance the other wilderness values of the WSA.

Desert bighorn sheep, which is a species associated with wilderness, and wild burros may inhabit the WSA.

The endangered peregrine falcon and black-footed ferret may occur in the WSA. Six other U.S. Fish and Wildlife Service (FWS) candidate threatened or endangered animal species may also inhabit or visit the WSA. Refer to Appendix 4 and the Affected Environment, Wildlife Including Special Status Species section of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (10,860 acres) and galleta-threeawn shrubsteppe (27,940 acres).

The juniper-pinyon PNV in the WSA is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. The galleta-threeawn shrubsteppe PNV is not now represented in the NWPS, however. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,475	84	2,133,145
Galleta-Threeawn Shrubsteppe	0	0	10	162,786
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,695,338
Galleta-Threeawn Shrubsteppe	0	0	10	162,786

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,220,875
Provo-Orem, Utah	11	721,793	90	2,761,868

Source: BLM File Data.

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Horseshoe Canyon (South) WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 93 areas comprising 5,475,207-acres in Utah and Arizona and Colorado, the adjacent states nearest the WSA.

A Horseshoe Canyon (South) Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wildernesses, totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the U.S. Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA, including the portion recommended for wilderness designation can be managed to preserve wilderness values now in the area. Current uses such as livestock grazing and maintenance of rangeland development such as fences, a livestock reservoir, corrals and spring developments, would continue with little or no effect on wilderness values.

Even though there are 320 acres in a post-FLPMA oil and gas lease in the WSA, the lease is subject to nonimpairment of wilderness values and it is expected that it will expire and not be renewed.

There are no known deposits of locatable minerals and there are presently no mining claims in the WSA.

There are no private in-holdings, rights-of-way, or subsurface rights within the WSA. The presence of three State sections (1,922 acres) scattered through the wilderness could create manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. One of the State sections (642 acres) is leased for oil, gas and hydrocarbons. It is projected that eventually about 15 acres of the recommended wilderness would be disturbed to provide access to State lands. Additionally, any developments on State in-holdings could reduce wilderness values in parts of the recommended wilderness. The probability of major developments on State lands is low.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) examined the WSA for mineral and energy resource potential and prepared a report and map (USGS Miscellaneous Field Studies Map MF 1754-A, R. F. Dubiel, et al., 1985). The report indicates that the WSA has a moderate potential for oil and gas. The potential for tar sand resources is unknown. The study area appears to have moderate potential for undiscovered uranium resources. The potential is low for metals other than uranium, however.

The WSA has some potential for materials that could be used for construction purposes. Sand and gravel are present in terrace deposits and could be sources of building stone. Larger and more accessible deposits of the same kind of materials are available outside the WSA, closer to markets, however.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 54 inputs specifically addressing this WSA were received from 291 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 272 commenters supported wilderness designation for part or all of the WSA, while 13 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that wilderness designation of the WSA would preserve the area for future generations and protect wilderness values from development. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness designation would harm local and State economies and doubted that the WSA is of an adequate size to be established as a wilderness. Most of those opposing wilderness designation were almost equally from rural Utah and from other states.

Three Federal agencies, the National Park Service (NPS), the Environmental Protection Agency (EPA), and the USBM commented on the Draft EIS. The NPS supported the all wilderness alternative and stated that the EIS should include a more complete discussion of how boundaries were determined, and an evaluation of State lands on boundaries for possible acquisition and inclusion in the wilderness proposal. They also questioned BLM's rating of traffic in the vicinity of the WSA. Both the NPS and

EPA commented that the analysis of impacts associated with tar sand development should be expanded.

The USBM did not take a position on wilderness designation for the WSA, but stated that the BLM had underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are three State sections (1,922 acres) of State land in the WSA. In commenting on the Draft EIS, the State of Utah commented that the Draft EIS lacked sufficient geologic information to predict economic potential of mineral resources. According to the State, the Horseshoe Canyon (South) WSA ranks high for wilderness values and moderate to high for conflicts in comparison with other WSAs in the region. Reported conflicts would be with base water rights, livestock grazing, and uranium potential in the southern half of the WSA. The State noted that conflicts may be eliminated with boundary adjustments.

The WSA is entirely within Wayne County. The Wayne County Master Planning Report does not identify recommendations at specific locations. The plan recognizes that ". . . outstanding natural landmarks should be preserved as much as possible." However, it also states that "Open spaces should be used for many purposes rather than strictly as wilderness areas." The Wayne County Commission is opposed to wilderness designation for this WSA because in their opinion the WSA has extensive uranium, silver, gold, and tar sand deposits and moderate to moderately high reserves of oil and gas potential. The County Commission also has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

HORSESHOE CANYON (SOUTH) WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Large Partial Wilderness (36,000 Acres)	No Action/No Wilderness	All Wilderness (38,800 Acres)	Small Partial Wilderness (28,700 Acres)
	Alternatives			
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 93 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 15 acres because of construction of access roads to State in-held lands and would be indirectly reduced in quality on up to 2,328 acres of the WSA. Special features would be preserved with the exception that Class A scenery would be reduced in quality in disturbed areas. Use of 2 miles of ways in the nondesignated portion would detract from opportunities for solitude and primitive recreation in the WSA.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 38 acres because of mineral exploration and development, construction of access roads to State in-held lands, and rangeland projects, and would be indirectly reduced in quality on up to an additional 5,820 acres of the WSA. Special features would not be significantly affected except for Class A scenery which would be reduced in quality in the disturbed areas. Use of ways and new mineral exploration roads would detract from opportunities for solitude and primitive recreation in the WSA. This alternative would not complement or enhance the NPS proposal for wilderness designation of NPS lands.	Wilderness designation would preserve wilderness values overall in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 15 acres because of construction of access roads to State in-held lands and would be indirectly reduced in quality on up to 2,328 acres of the WSA during the period of activity. Special features would be preserved overall. Some Class A scenery would be reduced in quality in disturbed areas. Designation would complement and enhance the NPS proposal for wilderness designation of the contiguous portion of NPS lands.	Wilderness values would be preserved in the designated area which is approximately 74 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 15 acres because of construction of access roads to State in-held lands and would be indirectly reduced in quality on up to 2,328 acres. Most of the impact would be in the designated area. Special features would be preserved with the exception that Class A scenery would be reduced in quality in the disturbed areas. Use of 11 miles of ways in the nondesignated portion would detract from opportunities for solitude and primitive recreation. This alternative would not complement or enhance the NPS proposal for wilderness designation for NPS lands.

HORSESHOE CANYON (SOUTH) WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Large Partial Wilderness (36,000 Acres)	No Action/No Wilderness	All Wilderness (38,800 Acres)	Small Partial Wilderness (28,700 Acres)
Impacts on Mineral and Energy Exploration and Production	Opportunities for oil and gas exploration would be foregone. There likely would not be a significant loss in recovery of oil and gas or other mineral and energy resources.	This alternative would not adversely affect oil and gas or other mineral exploration or production because leasing, location of claims, and development activities would continue without wilderness restrictions.	Opportunities for oil and gas exploration would be foregone. There would not be a significant loss in recovery of oil and gas or other mineral and energy resources.	Opportunities for oil and gas exploration would be foregone. There likely would not be a significant loss in recovery of oil and gas or other mineral and energy resources.
Impacts on Livestock Management	This alternative would result in restrictions on access to about 8 miles of ways in the WSA that are used for livestock management, project maintenance, and access to three corrals. Three proposed reservoirs may not be built. This alternative would result in increased costs and inconvenience for three permittees.	Livestock management would not be affected by this alternative because methods of access, maintenance, and development of rangeland projects would continue as at present.	Wilderness designation would result in restrictions on access to about 10 miles of ways that are used for livestock management, project maintenance, and access to three corrals. Three proposed reservoirs may not be built. Wilderness designation would result in inconvenience and an increase in costs for management by three permit-tees.	This alternative would result in restrictions on access to about 3 miles of ways that are used for livestock management, project maintenance, and access to one corral. Three proposed reservoirs may not be built. There would be very slight increases in cost for management by one permittee.

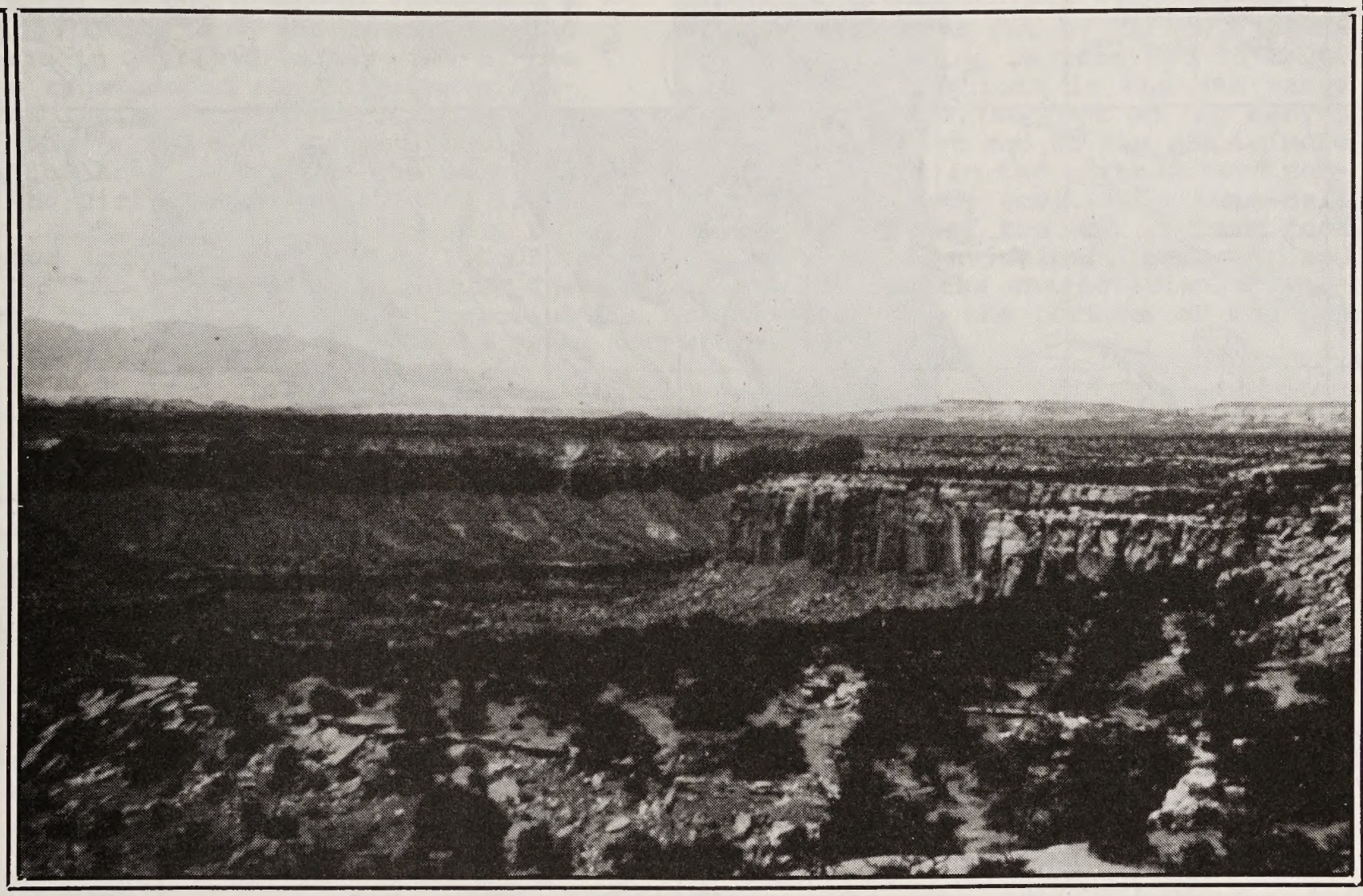
HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 28 S., R. 15 E., Sec. 2	641.96		State	State	No	Exchange		$2,000
T. 28 S., R. 15 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 29 S., R. 15 E., Sec. 2	640.28		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

French Spring-Happy Canyon WSA

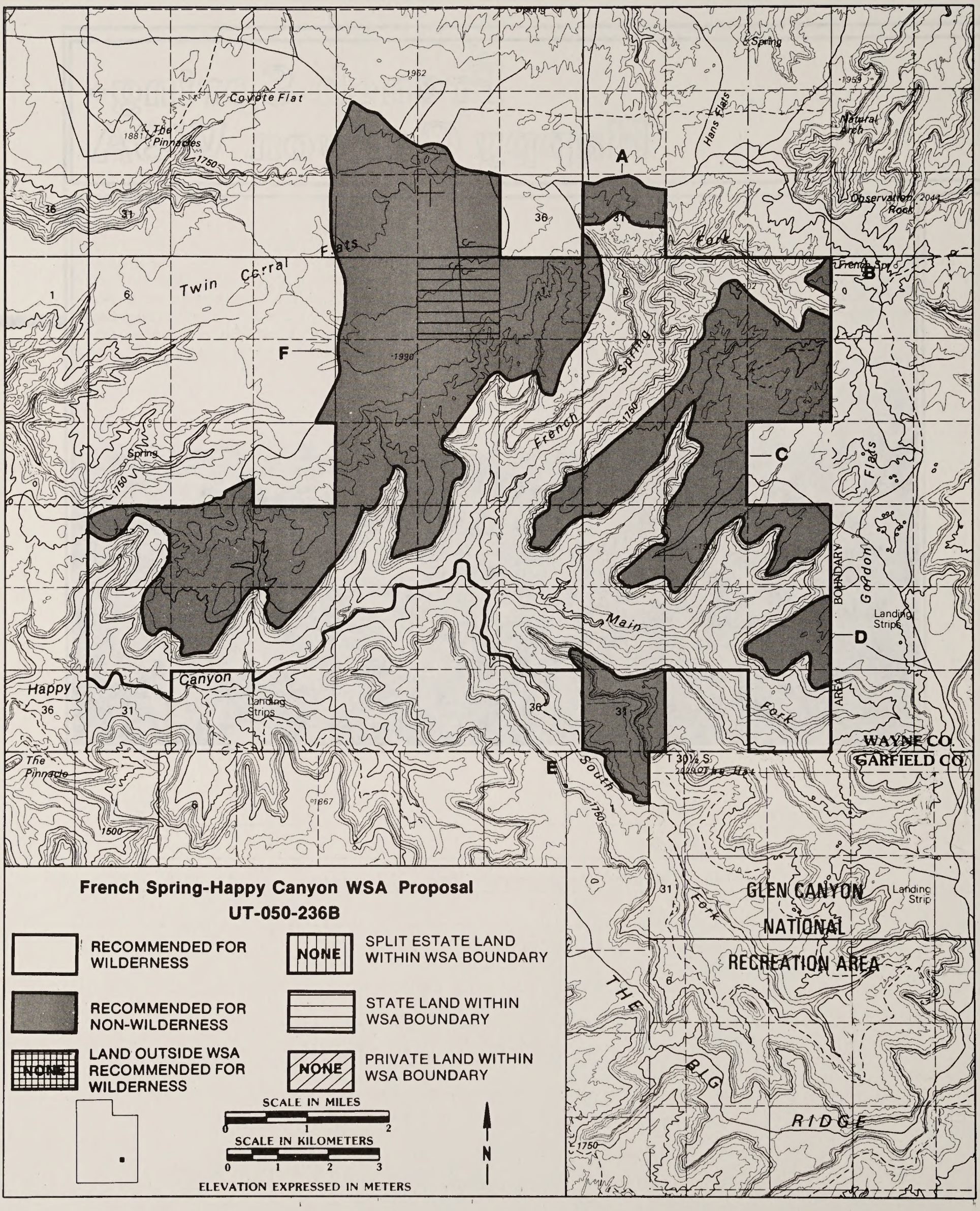


FRENCH SPRING-HAPPY CANYON WSA

R. 15 E. R. 16 E.

T. 30 S.

T. 31 S.



French Spring-Happy Canyon WSA Proposal
UT-050-236B

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

October 1991

FRENCH SPRING-HAPPY CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 25,000 acres

The French Spring-Happy Canyon Wilderness Study Area (WSA) (UT-050-236B) is in eastern Wayne and Garfield Counties, about 25 miles southeast of Hanksville, Utah. The WSA is an irregularly shaped unit, about 6 miles wide from north to south and 7 miles long from east to west. About 24,840 acres of the WSA are in Wayne County and the remaining 160 acres are in Garfield County. All of the portion recommended for wilderness designation is in Wayne County. The WSA is contiguous with Glen Canyon National Recreation Area (GCNRA) on the east and abuts the Dirty Devil WSA (UT-050-236A) at one point on the southwest and the Horseshoe Canyon (South) WSA (UT-050-237) for two miles on the north. The rest of the WSA is bounded by section lines, roads, and natural features (see Map).

The WSA contains 25,000 acres of public land administered by the Bureau of Land Management (BLM). One State section (640 acres) is inheld within the WSA, but this section is outside the recommended area (see Table 1).

The drainage in the WSA flows to the Dirty Devil River, southwest of the WSA. The study area consists of high, narrow ridges and a mesa cut by narrow, sheer-walled, meandering canyons 600 to 1,000 feet deep. Elevations in the WSA range from less than 4,750 feet on the canyon floor at the east end of the WSA to more than 6,750 feet in the northeastern portion of the study area. More than half of the surface of the WSA is bare rock and sand; pinyon-juniper, grasses, and blackbrush are the characteristic vegetative types in the portion of the WSA with plant cover.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN WILDERNESS STUDY AREA	ACRES
BLM (surface and subsurface)	25,000
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	640
Total	25,640
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within WSA)	11,110
BLM (outside WSA)	0
Split-Estate (within WSA)	0
Split-Estate (outside WSA)	0
Total BLM land recommended for wilderness	11,110
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	13,890
Split-Estate	0
Total BLM land not recommended for wilderness	13,890
In-holdings (State, Private)	640

Source: BLM File Data

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Study (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 11,110 acres would be designated as wilderness and the remaining 13,890 acres would be released for uses other than wilderness, which is the recommendation in this report; a no action (no wilderness) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
11,110 acres
(recommended for wilderness)
13,890 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 11,110 acres as wilderness and to release the remaining 13,890 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

The recommended portion of the WSA is confined to the canyons. All of the area is natural and almost all of it has outstanding opportunities for solitude and primitive recreation. The recommended area is within the Tar Sand Triangle Special Tar Sand Area, but conflict with tar sand recovery is not expected because tar sand is not present in the canyons, and the 5,530 acres of tar sand in the designated area would remain as a buffer along the cliff edges even if the area were open to development. No conflicts exist with other land uses.

In the area not recommended for wilderness designation, which consists of the benchlands above the canyon rims in parcels A through F, the opportunities for recreation and primitive recreation are not outstanding. This portion of the WSA has potential for tar sand extraction by in-situ methods in association with future development of the Tar Sand Triangle Special Tar Sand Area. Although development is not certain, potential for recovery of bitumen from tar sand is given precedence over known wilderness values.

3. CRITERIA CONSIDERED IN DEVELOPING THE PARTIAL WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Most of the WSA is in a natural condition. The Twin Corral Flats portion of the WSA consists of a broad, gently rolling benchland mesa covered with grass and scattered pinyon-juniper trees. The Happy and French Spring canyons deeply and abruptly cut the mesa with sheer-walled, meandering canyons. These are characterized by colorful rock formations and sheer cliffs to the canyon bottoms and rounded slickrock domes. Other landforms include buttes, spires, arroyos, rockfalls, alluvial fans, terraces, and sand dunes. All of these features combine to heighten the quality of naturalness in the WSA. The WSA has no significantly noticeable human intrusions. Approximately 8 miles of ways on Twin Corral and Gordon Flats are substantially unnoticeable and are rehabilitating by natural means. The only other intrusions are one corral and two unimproved wells in French Spring and Happy Canyon. Naturalness has not been altered since the BLM Intensive Wilderness Inventory in 1980.

B. Solitude

Opportunities for solitude are outstanding in French Spring and Happy Canyon (approximately 11,000 acres) but less than outstanding on the remaining 14,000 acres.

The meandering canyons, 600 to 1,000 feet deep, provide outstanding opportunities for solitude. Vegetative screening is very sparse in the canyon bottoms, however. Opportunities for solitude are less than outstanding above the

canyon rim, on rolling mesas vegetated with grasses and scattered pinyon.

No sights and sounds from outside the WSA adversely affect opportunities for solitude. The current low recreational use contributes to the opportunities for solitude.

C. Primitive and Unconfined Recreation

In the canyons, opportunities for primitive and unconfined recreation are outstanding on about 11,000 acres, the same areas that provide outstanding solitude. Opportunities for primitive recreation are less than outstanding on the mesas, which are the remaining 14,000 acres of the WSA.

The WSA has outstanding opportunities only for geological sightseeing in the canyons. Photography, dayhiking, and scenic sightseeing are average in terms of recreational experience.

The longest hiking route is 11 miles from Gordon Flats to Happy Canyon via French Spring Canyon. Recreational opportunities are somewhat restricted by terrain: mesas are the most limiting terrain in the WSA.

D. Special Features

The WSA's exceptional scenic values on 13,480 acres (54 percent of the WSA) were identified as a special feature during the wilderness inventory and was rated as outstanding for scenic quality.

At least one known archaeological site in the WSA is eligible for nomination to the National Register of Historic Places.

Desert bighorn sheep, which is a wilderness associated species, may inhabit the WSA. The endangered peregrine falcon and black-footed ferret may inhabit or visit the WSA. Nine other U.S. Fish and Wildlife Service (FWS) Candidate threatened or endangered animal species that are considered sensitive, i.e., may become candidates for listing as threatened or endangered, may inhabit or visit the WSA. Refer to Appendix 4 and the Affected Environment, Wildlife Including Special Status Species section of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is galleta-threeawn shrubsteppe (14,000 acres) and juniper-pinyon woodland (11,000 acres). Juniper-pinyon woodland PNV is well represented in the NWPS and other BLM wilderness study areas, but galleta-threeawn shrubsteppe PNV is not presently represented in the NWPS.

This information is summarized in Table 2, from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Provo-Orem, Utah, standard metropolitan statistical area. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of the Provo-Orem population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The French Spring-Happy Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and Arizona and Colorado, the adjacent states nearest the WSA.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,133,005
Galleta-Threeawn Shrubsteppe	0	0	10	176,726
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,695,198
Galleta-Threeawn Shrubsteppe	0	0	10	176,726

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREA	ACRES
Provo-Orem	11	721,793	90	2,761,868

Source: BLM File Data.

A French Spring-Happy Canyon Wilderness would supplement the NWPS in the Canyon Lands Section of the Colorado Plateau, however, where there are just two established wildernesses, totalling 70,751 acres.

There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the west-southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the National Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA, including the portion recommended for wilderness designation can be managed to preserve wilderness values now in the area. Current uses such as livestock grazing and maintenance of two wells in the recommended area and one corral in the area not recommended would continue with little or no effect on wilderness values.

There are 2,100 acres of pre-FLPMA oil and gas leases and 1,520 acres of post-FLPMA leases in the area recommended as wilderness. There are 4,260 acres of pre-FLPMA lease and 500 acres of post-FLPMA lease in the area not recommended for wilderness. The post-FLPMA leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed. The pre-FLPMA leases likely will not be developed for oil and gas but are under application for conversion to combined hydrocarbon leases. Oil and gas leases converted to combined hydrocarbon leases would contain nonimpairment stipulations and it is projected that development of tar sand would not take place if the WSA is designated wilderness. There are presently 480 acres of mining claims in the WSA. All are in the area not recommended as wilderness. Development of these claims is not expected in the foreseeable future due to the low probability of occurrence of locatable minerals.

There are no private in-holdings, rights-of-way, or subsurface rights within the WSA. There is only one State section (640 acres) in the WSA, all in the area not recommended as wilderness. The presence of this section of land would not create manageability problems.

Energy and Mineral Resource Values

The U.S. Geological System (USGS), and U.S. Bureau of Mines (USBM), examined the WSA for mineral and energy resource potential and prepared a report and map (USGS Miscellaneous Field Studies Map MF 1754-A, R. F. Dubiel, et al., 1985). The report indicates that the WSA has a moderate potential for oil and gas. The potential for tar sand resources is high. It is estimated that up to 1.6 billion barrels of oil may be contained in the tar sands which underlie about 25 percent of the WSA. The study area appears to have moderate potential for undiscovered uranium resources. The potential is low for metals other than uranium, however.

The extreme southwestern part of the study area has a moderate potential for uranium, as uranium-bearing strata and favorable geologic conditions are known just outside the WSA and may exist within that portion of the study area.

The WSA has some potential for materials that could be used for construction purposes. Sand and gravel are present in terrace deposits and could be sources of building stone. Larger and more accessible deposits of the same kind of materials are available outside the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness alternative, economic conditions would not be affected. In the long term, there would be major beneficial and adverse effects on all economic sectors and infrastructures of Wayne, Garfield, and possibly Emery counties from tar sand development because most of the tar sand deposits in the WSA would be in the area not recommended for wilderness designation where they could be accessed and developed.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 82 inputs specifically addressing this WSA were received from 328 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as an additional input or signature. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 308 commenters supported wilderness designation for part or all of the WSA, while 13 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that wilderness designation would protect the wilderness values in the WSA from development, preserve the area for future generations, and add ecosystem diversity to the NWPS. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that many similar areas are already under consideration for possible designation, that there is no need for more wilderness, and that wilderness designation of the area would harm state and local economy. Those opposing wilderness designation were about equally from rural Utah and from outside the state.

Three Federal agencies, the National Park Service (NPS), the Environmental Protection Agency (EPA) and the USBM

commented on the Draft EIS. Both the NPS and EPA commented that the analysis of impacts associated with tar sand development should be expanded.

The USBM did not take a position on wilderness designation for the WSA, but stated that the BLM had under estimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There is one State section (640 acres) in the WSA. In commenting on the Draft EIS, the State pointed out errors in mapping, mineral favorability and certainty ratings and BLM's estimates of the size of the tar sand deposit in the WSA. The State expressed concern about conflicts which may impact potential tar sand development and the need to protect special features in the WSA. According to the State, the French Spring-Happy Canyon WSA has low wilderness quality and high conflicts relative to other WSAs in the region. The major conflict would be with tar sand development.

About 24,840 acres of the WSA are in Wayne County. The Wayne County Master Planning Project Final Report does not address this area specifically, but recommends that ". . . open spaces be used for many purposes rather than strictly as wilderness areas." It also states that ". . . outstanding natural landmarks should be preserved as much as possible."

About 160 acres of the WSA are in Garfield County. The Garfield County Master Plan covers portions of the WSA. Garfield County has previously proposed to the Utah Congressional Delegation that 142,653 acres in three BLM and one FS area be designated as wilderness. The county plan recommends that ;the remaining lands within the county, including the French Spring-Happy Canyon WSA, be retained for multiple uses.

Both the Wayne and Garfield County Commissions are opposed to wilderness designation for this WSA and have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM land in Utah.

FRENCH SPRING-HAPPY CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (11,110 Acres)	No Action/No Wilderness	All Wilderness (25,000 Acres)
Impacts on Wilderness Values	Wilderness values would be protected from direct disturbance in the designated area which includes approximately 44 percent of the WSA. In the nondesignated area, naturalness and opportunities for solitude and primitive recreation would be directly lost on 9 acres because of uranium exploration and development and construction of access to State in-held lands and indirectly reduced in quality on up to 1,500 acres more in the short term. In the long term, naturalness and opportunities for solitude and primitive recreation would be directly lost on up to 5,550 acres because of tar sand development and the quality of these values would be indirectly reduced throughout the WSA including the designated portion. All direct impacts would be in the nondesignated area. Most of the Class A scenery and bighorn sheep habitat would be preserved but cultural values and endangered and sensitive animal species would be disturbed. Use of vehicular ways and mining roads in the nondesignated portion would be an occasional annoyance that would detract from opportunities for solitude and primitive recreation.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. Naturalness and opportunities for solitude and primitive recreation would be directly lost on 9 acres because of uranium exploration and development and construction of access to State in-held lands, and indirectly reduced in quality on up to 1,500 acres more in the short term. In the long term, naturalness and opportunities for solitude and primitive recreation would be directly lost on up to 5,550 acres because of tar sand development and indirectly reduced in quality throughout the WSA. Special features would be disturbed. Vehicular use of ways and mining roads would be an annoyance to those seeking solitude and primitive recreational activities.	Wilderness designation would preserve wilderness values overall throughout the WSA. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on 5 acres and would be indirectly reduced in quality on up to 1,000 acres. Special features would be preserved.
Impacts on Air Quality	Without new technology for extraction of oil from tar sand, long-term development would reduce air quality and with variances could exceed PSD Class I limitations in the Canyonland National Park for 45 to 270 years.	Over the short term, air quality would not be reduced by activities in the WSA. Without new technology for extraction of oil from tar sand, long-term development would reduce air quality and with variances could exceed PSD Class I limitations in the Canyonlands National Park for 45 to 270 years.	Air quality would not be affected by activities inside the WSA.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (11,110 Acres)	Alternatives: No Action/No Wilderness	Alternatives: All Wilderness (25,000 Acres)
Impacts on Geology and Topography	Impacts on geologic and topographic features would be as described for the No Action/No Wilderness Alternative because the same activities would occur with both alternatives.	In the long term, geologic and topographic features would be altered by tar sand development on 22 percent (5,550 acres) of the WSA.	Geologic and topographic features would not be significantly affected.
Impacts on Soils	Impacts would be essentially the same as with the No Action/No Wilderness Alternative. Increases in the soil erosion would be significant on a localized basis. Discharges into the Dirty Devil River would not be significant.	Increases in soil erosion would be significant (0.28 percent increase in the WSA) on a localized basis. Because of required reclamation and mitigation and because of low precipitation and flow in the drainage, increases in sediment discharges to the Dirty Devil River would be small.	A projected 0.03-percent increase in soil erosion would not be significant.
Impacts on Vegetation	Impacts would be the same as with the No Action/No Wilderness Alternative. Over the long term, composition of vegetation types would be altered or destroyed on 22 percent (5,550 acres) of the WSA (50 percent of the vegetated area).	Over the long term, composition of vegetation types would be altered or destroyed on 22 percent (5,550 acres) of the WSA (50 percent of the vegetated area). Special status plant species are not known to occur in the WSA and would not be affected.	Composition of existing vegetation types would be preserved.
Impacts on Water Resources	Over the long term, tar sand development would reduce the quality of groundwater, reduce salinity in the Colorado River, and compete with other potential water uses in the Dirty Devil River system.	Water quality, quantity, and uses would not be affected in the short term. Over the long term, tar sand development would reduce the quality of groundwater, reduce salinity in the Colorado River, reduce the flow of the Dirty Devil River, and compete with other potential consumptive water uses in the Dirty Devil River system.	In the short term, ground and surface water quality and quantity would not be affected. In the long term, groundwater quality could be reduced by tar sand development outside the WSA.

FRENCH SPRING-HAPPY CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (11,110 Acres)	No Action/No Wilderness	All Wilderness (25,000 Acres)
Impacts on Mineral and Energy Exploration and Production	This alternative would not significantly affect mineral production or exploration because the uranium and known tar sand areas would be in the nondesignated area and could be explored and developed without wilderness management restrictions.	This alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims, and development of minerals would continue without restrictions for protection of wilderness values.	The long-term potential for production of 503 million barrels of recoverable oil from tar sand and an unknown amount of uranium oxide would be foregone.
Impacts on Wildlife Habitat and Populations	Impacts would be essentially the same as with the No Action/No Wilderness Alternative. However, wildlife would benefit from provision of solitude on 44 percent (11,110 acres) of the WSA.	Over the long term, tar sand development would reduce available habitat for special status and most other species. Populations of some species would be reduced. Reclamation efforts would improve habitat for some species. Substantial value yearlong desert bighorn sheep habitat would not be disturbed.	Wildlife habitat and populations would be protected and would benefit from solitude.
Impacts on Livestock Management	In the long term, available livestock forage in one allotment would be reduced by 4 percent for the duration of tar sand activities. Access to the 8 miles of ways would not be restricted and livestock management would not be affected.	In the long term, available livestock forage in one allotment would be reduced by 4 percent for the duration of tar sand activities.	Restrictions on access would result in inconvenience and slight increases in management costs for one livestock permittee.
Impacts on Visual Resources	Impacts on visual resources would be the same as with the No Action/No Wilderness Alternative. Visual resources would be degraded throughout the WSA and VRM objectives would not be met on directly disturbed areas (5,550 acres).	Visual resources would be degraded throughout the WSA and VRM objectives would not be met on directly disturbed areas (5,550 acres).	Visual resources would be preserved because the potential for disturbance would be reduced to about 5 acres.

FRENCH SPRING-HAPPY CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (11,110 Acres)	Alternatives: No Action/No Wilderness	Alternatives: All Wilderness (25,000 Acres)
Impacts on Cultural Resources	Impacts would be approximately the same as with the No Action/No Wilderness Alternative because the same disturbance would occur. Only two recorded sites would receive protection as a result of wilderness designation under this alternative. The remaining 28 sites would be in the nondesignated area and would be protected by existing law.	Inadvertent loss or damage of archaeological sites may occur due to surface development and/or continued ORV use. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resource management would continue without wilderness management constraints.	All cultural resource management procedures would be subject to restrictions. The benefits of protection from most surface disturbance would outweigh potential damage from increased vandalism due to wilderness designation. Closure to all vehicular access would protect sites from damage and decrease accessibility in the unit.
Impacts on Recreation	Primitive recreation opportunities would be protected on 44 percent (11,110 acres) of the WSA below the canyon rims. Approximately 8 miles of vehicular ways would remain open for vehicular use. Long-term impacts of tar sand development would be as analyzed for the No Action/No Wilderness Alternative.	Opportunities for vehicular-based recreation would be maintained. Over the long term, opportunities for primitive recreation would be eliminated from the portion of the WSA above the canyon rims and reduced in quality in adjacent WSAs and proposed wilderness in the Glen Canyon NRA. Approximately 8 miles of vehicular ways would remain open for vehicular use.	This alternative would benefit primitive recreation by reducing surface-disturbing activities and increasing management attention and recognition of wilderness values. Although eliminated from the WSA, vehicle-based recreation would not decline on a regional basis because there are other more suitable ORV use areas in the vicinity of the WSA.
Impacts on Economic Conditions	Economic conditions would not be affected in the short term. In the long term, there would be major beneficial and adverse effects on all economic sectors and infrastructures of Wayne, Garfield, and possibly Emery Counties from tar sand development.	Economic conditions would not be affected in the short term. In the long term, there would be major beneficial and adverse effects on all economic sectors and infrastructures in Wayne, Garfield, and possibly Emery Counties from tar sand development.	Economic conditions would not be significantly changed in the short term. In the long term, major beneficial or adverse impacts of tar sand development on economic sectors and infrastructures of Wayne, Garfield, and possibly Emery Counties would not occur.

Fiddler Butte WSA



R. 13 E.

R. 14 E.

R. 15 E.

T. 31 S.

T. 32 S.

T. 33 S.

FIDDLER BUTTE WSA

GLEN CANYON NATIONAL RECREATION AREA

Fiddler Butte WSA Proposal UT-050-241

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

October 1991

FIDDLER BUTTE WILDERNESS STUDY AREA

1. THE STUDY AREA: 73,100 acres

The Fiddler Butte Wilderness Study Area (WSA) (UT-050-241) is in northeastern Garfield County, about 25 miles east of Hanksville, Utah, and directly north of the Glen Canyon National Recreation Area (GCNRA). The study area is about 11 miles wide from north to south and about 12 miles long from east to west.

The Colorado River is south of the WSA. The WSA is defined by a road along the northern boundary and by State Highway 95 along the southwestern boundary, the GCNRA on the south and east, and section lines on the northwest which include land with wilderness boundaries (see Map). The WSA contains 73,100 acres of public land administered by the Bureau of Land Management (BLM).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	73,100
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,836
Total	76,936
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	32,700
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	32,700
In-holdings (State, private)	1,920
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	40,400
Split-Estate	0
Total BLM land not recommended for wilderness	40,400
In-holdings (State, Private)	1,916

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Six sections of State land, comprising 3,836 acres, are inheld within the WSA. Three of these sections (1,920 acres) are in the portion that is recommended for wilderness designation. No private or other non-Federal land is included (see Table 1).

The portion of the WSA recommended for wilderness designation consists of two parts: a prominent mesa of about 5,700 acres in the eastern portion of the WSA, known as The Block, where elevations range from about 5,600 feet near the base of the mesa to 7,100 feet on North

Block; and the western portion of the WSA, about 27,000 acres, consisting of narrow ridges that separate eight essentially parallel canyons 5 to 8 miles long, that slope southwest into North Wash, a tributary of the Colorado River. The GCNRA and the Dirty Devil River Canyon divide the two portions of the recommended area. Elevations in the western portion are from 4,700 feet to about 6,500 feet. Vegetation is predominantly blackbrush-shadscale with scattered pinyon-juniper woodland, but almost one-fifth of the WSA is bare rock and sand.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Four alternatives were analyzed in the EIS: a large partial wilderness alternative where 32,700 acres would be designated as wilderness and the remaining 40,400 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; an all wilderness alternative; and a smaller partial wilderness alternative where 27,000 acres would be designated as wilderness.

2. RECOMMENDATION AND RATIONALE:
   32,700 acres
   (recommended for wilderness)
   40,400 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate 32,700 acres as wilderness and to release the remaining 40,400 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will apply to any in-holdings acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides information on acquisition.

The recommendation would create two separate wilderness areas: Stair Canyon (27,000 acres) to the west and The Block (5,700 acres) to the east. Both areas are in a natural state. About 72 percent of the total area has outstanding solitude and all of both areas provide outstanding opportunities for primitive recreation.

No conflicts exist in Stair Canyon. Tar sand, uranium, gold, silver, and copper may occur in the vicinity of The Block, but the likelihood of development is low.

Wilderness designation would complement the proposed wilderness in the adjacent portion of the GCNRA.

The portion of the WSA that is not recommended for wilderness designation has two parts, Areas A and B, as shown on the Map. Portions of these areas are natural, but they have several intrusions. The intrusions are mainly roads built for administration of livestock grazing and tar sand exploration. These intrusions are noticeable because of flat terrain and sparse vegetation. Both areas have limited opportunities for solitude and primitive and unconfined recreation. Conflicts with future tar sand development within the Tar Sand Triangle Special Tar Sand Area (STSA), would occur if these areas were to be managed as wilderness. Tar sand extraction is not expected to occur in the short-term in the areas not recommended for designation, but the potential for long-term development is considered to outweigh known wilderness values.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Overall, 64,300 acres in the WSA meet the Wilderness Act criteria for naturalness.

Naturalness is enhanced by the Dirty Devil River which flows in a magnificent 2,000-foot deep canyon that divides the

unit. East of the river are a number of isolated buttes. The largest, The Block, rises above the broad Moenkopi bench and is pristine. Access is available to this remote area, but is difficult. West of the river are a number of North Wash tributaries which cut through the Navajo and Wingate sandstones. These canyons are characterized by colorful sheer cliffs. Vegetation is sparse and there is an abundance of slickrock.

Approximately 22,200 acres west of the Dirty Devil River are in a completely natural condition, with no human intrusions requiring rehabilitation.

East of the Dirty Devil River, the quality of naturalness varies considerably. The top of The Block, about 3,500 acres, is essentially pristine and has few, if any, signs of human activity. Portions of the benchlands around The Block are natural but there are several intrusions.

In the southeastern part of the WSA, The Cove contains approximately 1 mile of ways and 7.5 miles of maintained pre-FLPMA cherry-stemmed roads. These intrusions are noticeable because of the terrain and sparse vegetation.

A pre-FLPMA mining road approximately 3.5 miles long follows the west fork of Rock Canyon to a point near the southwest corner of The Block. This intrusion was also deleted from the WSA by cherry-stemming.

A way (approximately 6 miles) connects the two areas described above, but it is substantially unnoticeable. Several stock reservoirs in the vicinity are substantially unnoticeable.

Approximately 16.6 miles of roads and ways are north of The Block, in the Fiddler Butte and North and South Hatch Canyon areas. While there is no current mining activity, uranium exploration and assessment work are on-going. Portions of these roads are graded and are substantially noticeable. An old airstrip in South Hatch Canyon is deteriorating, but is still substantially noticeable. Between 1980 and 1982, tar sand and uranium exploration and construction of a small livestock reservoir occurred in areas that were later added to the WSA as a result of appeals on the BLM 1980 Intensive Inventory Decision. Tar Sand exploration consisted of approximately 6 miles of road and eight drill holes in the vicinity of South Hatch Canyon. Disturbed areas have been rehabilitated. Thirteen holes were drilled along existing access routes for uranium exploration. The drill pads, approximately 20 by 50 feet in size, have been rehabilitated. Uranium assessment was also done on State land in the southeastern part of the WSA in 1981. A road that is now cherry-stemmed was used for access. A livestock reservoir that covers approximately a 0.25 acre is south of the Sewing Machine. Construction did not require new access.

B. Solitude

Overall, approximately 35 percent (25,600 acres) of the WSA provides outstanding opportunities for solitude. Solitude is judged to be less than outstanding in the eastern portion of the WSA (47,500 acres). The WSA has a wide variety of topographic features, and the quality of solitude varies considerably.

In North Wash and the Dirty Devil River canyons, the quality of solitude is outstanding because of the variety, size, isolation, and configuration of the canyons. Although the canyons are relatively short, their number and configuration provide seclusion. Vegetation is sparse in these areas and is not a contributing factor to solitude. No outside sights and sounds exist to adversely affect a visitor's ability to find seclusion, except in areas immediately adjacent to State Highway 95. Opportunities for solitude in this portion of the WSA (22,100 acres) are outstanding.

The top of The Block (North and South Block) contains about 3,500 acres of land in an irregular configuration, and the opportunity for solitude is outstanding. Overall, size and configuration could force visitors into close proximity to each other at some locations, particularly the land bridge connecting the North and South Blocks. Vegetation screening is provided by dense pinyon-juniper woodland vegetation and the terrain. Scenic views of the Henry Mountains, Dirty Devil River Canyon, Dark Canyon, Cataract Canyon, Canyon-

lands National Park, and the Abajo Mountains enhance the experience of solitude.

The benchlands surrounding The Block generally consist of low hills with sparse, low-growing vegetation. The terrain tends to force visitors to go around the base of The Block or the other buttes in the area. Solitude is adversely affected by some of the mining activity, roads, and ways in the immediate area, such as in The Cove and around Fiddler Butte.

Opportunities for solitude in the northeastern 8,100 acres of the WSA are less than outstanding. The dominant feature of this portion of the WSA is an unnamed mesa between North and South Hatch Canyons. The mesa top is sparsely covered by pinyon-juniper woodland and brush. Visitors tend to be in close proximity in this area, reducing the opportunity for seclusion. Vegetation on the surrounding benchlands is sparse, resulting in little chance to be screened from others.

C. Primitive and Unconfined Recreation

The recreational opportunities vary, depending on location in the WSA.

In the western portion of the WSA, recreational opportunities for hiking are considered outstanding in the canyons of North Wash due to the variety of hiking routes and ease of access from Highway 95. This area of 22,200 acres meets the standards of the Wilderness Act for outstanding opportunities for primitive and unconfined recreation.

Opportunities for backpacking and photography are outstanding along the Dirty Devil River and The Block. These two areas constitute about 10,500 acres.

Recreational opportunities are less than outstanding in the benchlands east of the Dirty Devil River, and this area does not offer a diversity of recreational opportunities that could be considered outstanding. This area covers about 40,400 acres.

D. Special Features

Special features of this WSA identified during the BLM Wilderness Inventory include cultural resources (with a high potential for finding additional sites), the scenery along the canyons of the Dirty Devil River, and the views from The Block.

Approximately 26,000 acres or 36 percent of the WSA is rated as outstanding for scenic quality.

The WSA includes a 4-mile segment of the Dirty Devil River which is a Nationwide Rivers Inventory segment with potential for study and addition to the National Wild and Scenic Rivers System.

The WSA may have Desert bighorn sheep, which is a species associated with wilderness. Peregrine falcons and black-footed ferrets, both of which are listed as endangered species, and five additional special status animal species may inhabit or frequent the WSA.

Sclerocactus wrightiae, an endangered cactus, may occur in the WSA. In addition, there are two other special status plant species that are likely to occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (24,750 acres), galleta-threeawn shrubsteppe (2,400 acres), juniper-pinyon woodland (41,050 acres), and saltbush-greasewood (4,900 acres).

Juniper-woodland PNV is well represented in the NWPS nationally and in one Utah wilderness. Saltbush-greasewood PNV is represented only in Utah. Blackbrush and galleta-threeawn shrubsteppe PNV are not represented at all in the NWPS. All four PNV types are represented in other BLM study areas. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	205,314
Galleta-Threeawn-Shrubsteppe	0	0	10	188,326
Juniper-Pinyon Woodland	11	1,401,745	84	2,102,955
Saltbush-Greasewood	1	20,000	17	389,103
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	205,314
Galleta-Threeawn-Shrubsteppe	0	0	10	188,326
Juniper-Pinyon Woodland	1	26,000	53	1,665,148
Saltbush-Greasewood	1	20,000	17	389,103

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Provo-Orem, Utah	11	721,793	90	2,713,768

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Provo-Orem, Utah standard metropolitan statistical area. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of this population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The Fiddler Butte WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 93 areas totaling 5,475,207 acres in Utah, Arizona, and Colorado.

A Fiddler Butte Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness and to the west-southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the U.S. Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA, including the portion recommended for wilderness designation could be managed to preserve the wilderness values now in the area. Current uses including livestock grazing and maintenance of one spring development and 13 reservoirs would continue without significantly affecting management of the wilderness.

There are 7,760 acres of pre-FLPMA oil and gas leases in the area recommended for wilderness. All of these leases are under application for conversion to combined hydrocarbon leases. It is not expected that the leases would be developed as conventional oil and gas leases if the area is designated as wilderness. If converted to combined hydrocarbon leases, they would contain stipulations that would limit development to those activities that would not degrade wilderness values; therefore, it is projected that none of the leases would be developed following wilderness designation.

There are 760 acres of mining claims in the area recommended for wilderness. Because of moderate certainty that uranium is within the WSA, it is projected that following wilderness designation, uranium exploration would occur on at least a part of these and future mining claims existing at the time of designation. It is projected that only 4 acres of disturbance would result from uranium exploration in the area recommended as wilderness. Exploration and small scale development of uranium would not reduce wilderness values in the recommended area as a whole.

Management of the recommended area could be further complicated by the presence of portions of three sections of State land (1,920 acres) in the recommended part of the WSA because BLM could not control activities on these lands and would be required to provide reasonable access. However, only two of the three sections in the recommended area have uranium potential, and these are on The Block where access would be difficult. Therefore, development of the uranium on in-held lands in the recommended area is not expected.

There are 18,323 acres of pre-FLPMA oil and gas leases in the portion of the WSA not recommended for wilderness, but they likely would not be developed following designation for the reasons explained above. Management of the area not recommended for wilderness would be more difficult than in the recommended area because of the uranium potential of the area. There are 1,940 acres of mining claims in this part of the WSA, and it is projected that about 45 acres of disturbance would occur following designation for exploration of valid claims. Management of this area also would be complicated by the presence of all or part of four sections of State land (1,916 acres) in more accessible areas where exploration would likely occur. Uranium developments on these in-held lands also could degrade wilderness val-

ues in the surrounding wilderness. Additionally, if large scale tar sand developments occur near the WSA, they would detract from wilderness management in the area not recommended as wilderness.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Fiddler Butte WSA (USGS Bulletin 1759-B, Russell F. Dubiel, et al., 1989). The report indicates that the eastern portion of the area recommended for wilderness designation may contain subeconomic resources of tar sands in the northeastern part, with in-place resources estimated to be 375 to 480 million barrels of oil. Dolomite suitable for various industrial uses is present, but the remote location of the deposit makes development unlikely. Common sand, gravel, and stone within the area have no unique qualities and are not likely to be developed. Abundant petrified wood, suitable for collecting and polishing, is present in some locations. The southwestern part of this portion of the WSA has moderate mineral resource potential for localized tar sand deposits. The entire eastern recommended portion has a moderate potential for undiscovered uranium and vanadium, oil and gas, small isolated occurrences of silver and gold, and a low potential for geothermal resources and other undiscovered metals.

The western portion of the area recommended for designation is underlain with tar sands that are estimated to contain the equivalent of 260 to 320 million barrels of oil. Uranium occurs in channel deposits in part of the area. An estimated 7,500 tons of uranium ore were produced from workings just outside the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness alternative, economic conditions would not be affected. In the long term, there would be major beneficial and adverse effects on all economic sectors and infrastructures of the Wayne, Garfield, and possibly Emery Counties from tar sand development because much of the tar sand deposits in the WSA would be in the area not recommended for wilderness designation where they could be accessed and developed.

An unquantified but potentially significant economic impact could result in Emery, Garfield, Sevier, and Wayne Counties, if water developments are restricted upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 70 inputs specifically addressing this WSA were received from 379 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 55 commenters supported wilderness designation for part or all of the WSA, while 320 commenters were opposed. Four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness stated that designation of the WSA would complement proposed wilderness in the adjacent portion of GCNRA and noted the WSA contains wilderness values. The majority of those commenting in favor of wilderness were from other states. Of particular concern was the need to protect wilderness values.

Those opposing wilderness were concerned that wilderness would prohibit or restrict mineral exploration and develop-

ment, public access, livestock management, and flood and erosion control; harm local and State economies; and that wilderness designation is unnecessary to protect the area and that it would conflict with other uses. Most of those opposing wilderness designation were from rural Utah.

Three Federal agencies, the National Park Service (NPS), the Environmental Protection Agency (EPA), and USBM commented on the Draft EIS. The NPS concurred with the proposed action alternative and felt it would coincide with the natural zone in the GCNRA. Both the NPS and EPA commented that the analysis of impacts associated with tar sand development should be expanded.

The USBM did not take a position on wilderness designation for the WSA, but stated that the BLM had under estimated the petroleum potential of the WSA. The USBM also had questions on the mineral data presented in the EIS.

No comment letters were received on the Final EIS.

There are six State sections (3536 acres) of State land in the WSA. In commenting on the Draft EIS, the State of Utah pointed out inconsistencies in the reported State in-holdings, the need for discussion of off-highway vehicle use in the WSA and the lack of a summary of solitude characteristics. According to the State, the Fiddler Butte WSA has moderate wilderness values and high conflicts in comparison with other WSAs in the region. Reported conflicts would be with tar sand and the Highway 95 right-of-way. The State noted that the 27,000-acre partial wilderness alternative would eliminate most conflicts.

The Fiddler Butte WSA is in Garfield County. The Garfield County Master Plan covers this WSA. In the plan, Garfield County proposed that 142,653 acres in three BLM and one FS area be recommended to the Utah Congressional delegation as wilderness. The County plan recommends that the remaining lands within the County, including the Fiddler Butte WSA, be retained for multiple uses. The Garfield County Commission is opposed to designation of this WSA because in their opinion there are large commercial deposits of tar sand and because partial wilderness designation would require peripheral zones of influence that would constrain tar sand development on lands adjacent to the proposed wilderness. The Commission pointed out that Garfield County's average family income is about 25 percent below the State average, and therefore the county cannot afford to bypass any potential resource development opportunities.

The County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

FIDDLER BUTTE WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Large Partial Wilderness (32,700 Acres)	No Action/No Wilderness	All Wilderness (73,100 Acres)	Small Partial Wilderness (27,000 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 45 percent of the WSA. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on 62 acres because of uranium exploration and development, construction of access roads to State in-held lands, and rangeland projects, and indirectly reduced in quality on up to 1,462 acres more. Almost all of the direct impact would be in the nondesignated area. Use of 23.6 miles of ways and future mining roads in the nondesignated portion would detract from solitude and primitive recreation. In the long term, tar sand development would result in direct loss of wilderness values on 12,800 acres of the WSA in the nondesignated portion and would indirectly reduce the quality of opportunities for solitude and primitive recreation and scenic values throughout the WSA. The best special features including most Class A scenery and the Dirty Devil River would be preserved in the designated area. Cultural values, special status species, and wildlife would be disturbed but because of required mitigation would not be significantly affected in the nondesignated area. This alternative would complement the NPS proposal for wilderness management on contiguous NRA lands.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on 62 acres because of uranium exploration and development, construction of access roads to State in-held lands, and rangeland projects, and would be indirectly reduced in quality on up to 1,462 acres. Special features would not be significantly affected. In the long term, wilderness values would be indirectly lost on an additional 15,100 acres and would be indirectly reduced in quality throughout the WSA. Vehicular use of 23.6 miles of ways and future mining roads would detract from opportunities for solitude and primitive recreation. This would not complement goals of the NPS for wilderness management of contiguous NRA lands. Special features such as the wild and scenic river qualities of the Dirty Devil River, Class A scenery, and cultural values would be negatively affected over the long term.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 38 acres of the WSA because of uranium exploration and development, construction of access roads to State in-held lands, and rangeland projects, and indirectly reduced in quality on up to an additional 731 acres. Special features would be preserved. This alternative would complement NPS goals for wilderness management of contiguous NRA lands.	Wilderness values would be preserved overall in the designated area which is approximately 37 percent of the WSA. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on less than 62 acres of the WSA because of uranium exploration and development, construction of roads for access to State in-held lands, and rangeland projects, and indirectly reduced in quality on up to 1,462 acres more. All of the direct impact would be in the nondesignated area. Use of 23.6 miles of ways and future mining roads in the nondesignated portion would detract from opportunities for solitude and primitive recreation. Over the long term, tar sand development would result in direct loss of wilderness values on 15,100 acres of the WSA in the nondesignated portion, and would indirectly reduce opportunities for solitude and primitive recreation throughout the WSA. The best special features including the Dirty Devil River and most Class A scenery would be preserved in the designated area. This alternative would complement the NPS proposal for wilderness designation of the contiguous NRA lands.

FIDDLER BUTTE WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Large Partial Wilderness (32,700 Acres)	No Action/No Wilderness	All Wilderness (73,100 Acres)	Small Partial Wilderness (27,000 Acres)
Impacts on Air Quality	Over the short term, air quality would not be reduced by activities in the WSA. Without new technology for extraction of oil from tar sand, long-term development would reduce air quality and with variances could exceed PSD Class I limitations in Canyonlands National Park.	Over the short term, air quality would not be significantly reduced by activities in the WSA. Without new technology for extraction of oil from tar sand, long-term development would reduce air quality and with variances could exceed PSD Class I limitations in Canyonlands National Park.	Air quality would not be affected by activities inside the WSA.	Over the short term, air quality would not be reduced by activities in the WSA. Without new technology for extraction of oil from tar sand, long-term development would reduce quality and with variances could exceed PSD Class I limitations in Canyonlands National Park.
Impacts on Geology and Topography	Geologic and topographic features would be altered in the long term on 18 percent (12,800 acres) of the WSA.	Geologic and topographic features of the WSA would be altered on 21 percent (15,100 acres) of the WSA.	Geologic and topographic features would not be significantly affected because disturbance would be minimized and tar sand would not be developed.	Geologic and topographic features would be altered in the long term on 21 percent (15,100 acres) of the WSA, all in the nondesignated area.
Impacts on Soils	Increases in soil loss would be significant (37 percent) on a localized basis. Discharge into the Dirty Devil River would not be significant because of required mitigation and small flows in drainages.	Increases in soil erosion would be significant (44 percent) on a localized basis. Discharge into the Dirty Devil River would not be significant because of required mitigation and small flows in drainages.	Impacts on soils and a 1-percent increase in erosion would be insignificant.	Increases in soil erosion would be significant (44 percent) on a localized basis. Discharges into the Dirty Devil River would not be significant because of required mitigation and small flows in the drainages.
Impacts on Vegetation	Over the long term, vegetation types would be altered or destroyed on 18 percent (12,800 acres) of the WSA. Individual plants of special status species may be destroyed but the viability of populations would be maintained. Vegetation types and special status species would receive additional protection on 45 percent of the WSA.	Over the long term, vegetation types would be altered or destroyed on 21 percent of the WSA. Individual plants of special status species may be destroyed but the viability of populations would be maintained.	Vegetation types would not be significantly altered and special status species would be protected.	Over the long term, vegetation types would be altered or destroyed on 21 percent of the WSA. Individual plants of special status species may be destroyed but the viability of populations would be maintained. Vegetation types and special status species would receive additional protection on 37 percent of the WSA.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Large Partial Wilderness (32,700 Acres)	No Action/No Wilderness	All Wilderness (73,100 Acres)	Small Partial Wilderness (27,000 Acres)
Impacts on Water Resources	Water quality would not be affected in the short term. Over the long term, tar sand development would reduce the quality of groundwater and reduce salinity in the Colorado River. Impacts on use of water in the Dirty Devil River system would be the same as with the All Wilderness Alternative because the Dirty Devil River would be in the designated area.	In the short term, ground and surface water quality and quantity would not be significantly affected. Over the long term, tar sand development would reduce salinity in the Colorado River, reduce the flow of the Dirty Devil River, and compete with other potential consumptive water uses in the Dirty Devil River system.	In the short term, ground and surface water quality and quantity would not be affected. In the long term, groundwater quality could be affected by tar sand development outside the WSA. Future water diversions and new consumptive uses in the Dirty Devil River system upstream of the WSA in Sevier, Wayne, Garfield, and Emery Counties may be hampered or restricted.	Impacts on water resources would be essentially the same as with the Large Partial Wilderness Alternative.
Impacts on Mineral and Energy Development and Production	Long-term potential for production of 39 million barrels of oil from tar sand and an unknown amount of uranium oxide would be foregone.	This alternative would not affect mineral exploration or production because the WSA would remain open to mineral leasing, location of mining claims, and mineral exploration and development without restriction for protection of wilderness values.	Long-term potential for production of 208.5 million barrels of oil from tar sand and an unknown amount of uranium oxide would be foregone.	This alternative would not significantly affect mineral exploration or production because known mineral resources would be in the nondesignated area and could be developed as with the No Action/No Wilderness Alternative.
Impacts on Wildlife Habitat and Populations	Wildlife habitat and populations would not be significantly affected in the short term. Wildlife populations would benefit from solitude on 45 percent of the WSA. Over the long term, tar sand development would reduce available habitat for endangered, sensitive, and other species including desert bighorn sheep in the eastern portion of the WSA. Populations of some species would be reduced but reclamation would improve habitat for others.	Wildlife habitat and populations would not be significantly affected in the short term. Over the long term, tar sand development would reduce available habitat for special status species and most other species including desert bighorn sheep on 21 percent of the WSA. Populations of some species would be reduced in the WSA but reclamation efforts would improve habitat for others.	Wildlife habitat and populations would be protected and would benefit from solitude.	Wildlife habitat and populations would not be significantly affected in the short term. Wildlife populations would benefit from solitude on 37 percent of the WSA. Long-term impacts would be as described for the No Action/No Wilderness Alternative because all of the projected disturbance would occur in the nondesignated area.

FIDDLER BUTTE WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

	Alternatives			
Issue Topic	Recommendation Large Partial Wilderness (32,700 Acres)	No Action/No Wilderness	All Wilderness (73,100 Acres)	Small Partial Wilderness (27,000 Acres)
Impacts on Livestock Management	In the short term, the methods and costs of livestock management would not be affected. In the long term, available livestock forage in one allotment would be reduced by 12 percent for the duration of the tar sand activities. Access would not be affected because the 23.6 miles of ways would remain open to unrestricted use by the four permittees.	In the short term, livestock management would not be affected. In the long term, available livestock forage in one allotment would be reduced by 12 percent for the duration of tar sand activities.	Restrictions on access would result in inconvenience to four livestock permittees in one allotment. Management costs would increase slightly.	Impacts would be the same as with the Large Partial Wilderness Alternative.
Impacts on Visual Resources	Visual resources would be preserved overall in the designated portion which is 45 percent of the WSA. VRM class objectives would not be met on 12,800 acres in the nondesignated area disturbed by tar sand development.	Visual resources would be degraded throughout the WSA and VRM objectives would not be met in the directly disturbed areas (15,100 acres) in the eastern portion of the WSA.	Visual resources would be preserved overall.	Visual resources would be preserved overall in the designated portion which is 37 percent of the WSA. VRM class objectives would not be met on 15,100 acres in the nondesignated area disturbed by tar sand development.
Impacts on Cultural Resources	Forty-five percent of the WSA including eight recorded sites would receive protection as a result of wilderness designation under this alternative. The remainder of the WSA including 32 recorded sites would be adversely affected by tar sand development and possibly ORV use. Intentional vandalism and artifact collection may increase.	In the long term, sites in the eastern portion of the WSA would be adversely affected under this alternative. Continued vehicular access to the unit may cause both intentional and unintentional damage to cultural resources. Cultural resource management would continue without regard to wilderness management.	The benefits of protection from surface disturbance would outweigh potential damage from increased vandalism from wilderness designation. Closure to all vehicular activity would protect sites from unintentional damage and generally decrease accessability in the unit. Management of cultural resources would be restricted in scope and execution to protect other wilderness values.	Thirty-seven percent of the WSA including three recorded sites would receive protection as a result of wilderness designation under this alternative. In the long term, the remainder of the WSA including 37 known sites would be adversely affected. Intentional vandalism and artifact collection may increase.

FIDDLER BUTTE WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Large Partial Wilderness (32,700 Acres)	No Action/No Wilderness	All Wilderness (73,100 Acres)	Small Partial Wilderness (27,000 Acres)
Impacts on Recreation	Primitive recreation opportunities would be preserved on 45 percent of the WSA. Over the long term, as tar sand development occurs, opportunities for primitive recreation would be significantly reduced in quality or eliminated in the nondesignated area. Approximately 23.6 miles of ways would remain open for vehicular use on the remaining 55 percent (40,400 acres) of the WSA further reducing the quality of primitive recreational opportunities. Wild and scenic river values of the Dirty Devil River would be preserved.	Opportunities for vehicular-based recreation would be maintained as tar sand development occurs. Over the long term, opportunities for primitive recreation would be significantly reduced in quality or eliminated from the eastern portion of the WSA. Wild and scenic river values of the Dirty Devil River would be altered.	This alternative would benefit primitive recreation by reducing surface-disturbing activities and increasing management attention and recognition of primitive recreation values. ORV use would be eliminated from the WSA but would not decline on a regional basis because vehicle use is low and there are other vehicle use areas near the WSA. Wild and scenic river values of the Dirty Devil River would be preserved.	Primitive recreation opportunities would be preserved on 37 percent of the WSA. Over the long term, as tar sand development occurs, opportunities for primitive recreation would be significantly reduced in quality or eliminated in the nondesignated area. Approximately 23.6 miles of ways would remain open for vehicular use on the remaining 63 percent (46,100 acres) of the WSA further reducing the quality of primitive recreational opportunities. Wild and scenic river values of the Dirty Devil River would be preserved.
Impacts on Economic Conditions	Economic conditions would not be significantly affected in the short term. In the long term, there would be major beneficial and adverse effects from tar sand developments as described for the No Action/No Wilderness Alternative. Impacts from potential water consumptive projects upstream of the WSA may not occur.	Economic conditions would not be significantly affected in the short term. In the long term, there would be major beneficial and adverse effects on all economic sectors and infrastructures of Wayne, Garfield, Sevier, and possibly Emery Counties from the tar sand and water developments in the Dirty Devil River system.	Economic conditions would not be significantly changed in the short term. In the long term, major beneficial or adverse impacts on the economic sectors and infrastructures of Wayne, Garfield, Sevier, and possibly Emery Counties from tar sand development in the WSA would not occur. Economic impacts from water consumptive projects upstream of the WSA in the Dirty Devil River system may not occur.	Economic conditions would not be significantly affected in the short term. In the long term, there would be major beneficial and adverse effects from tar sand development as described for the No Action/No Wilderness Alternative. Impacts from potential water consumptive projects upstream of the WSA may not occur.

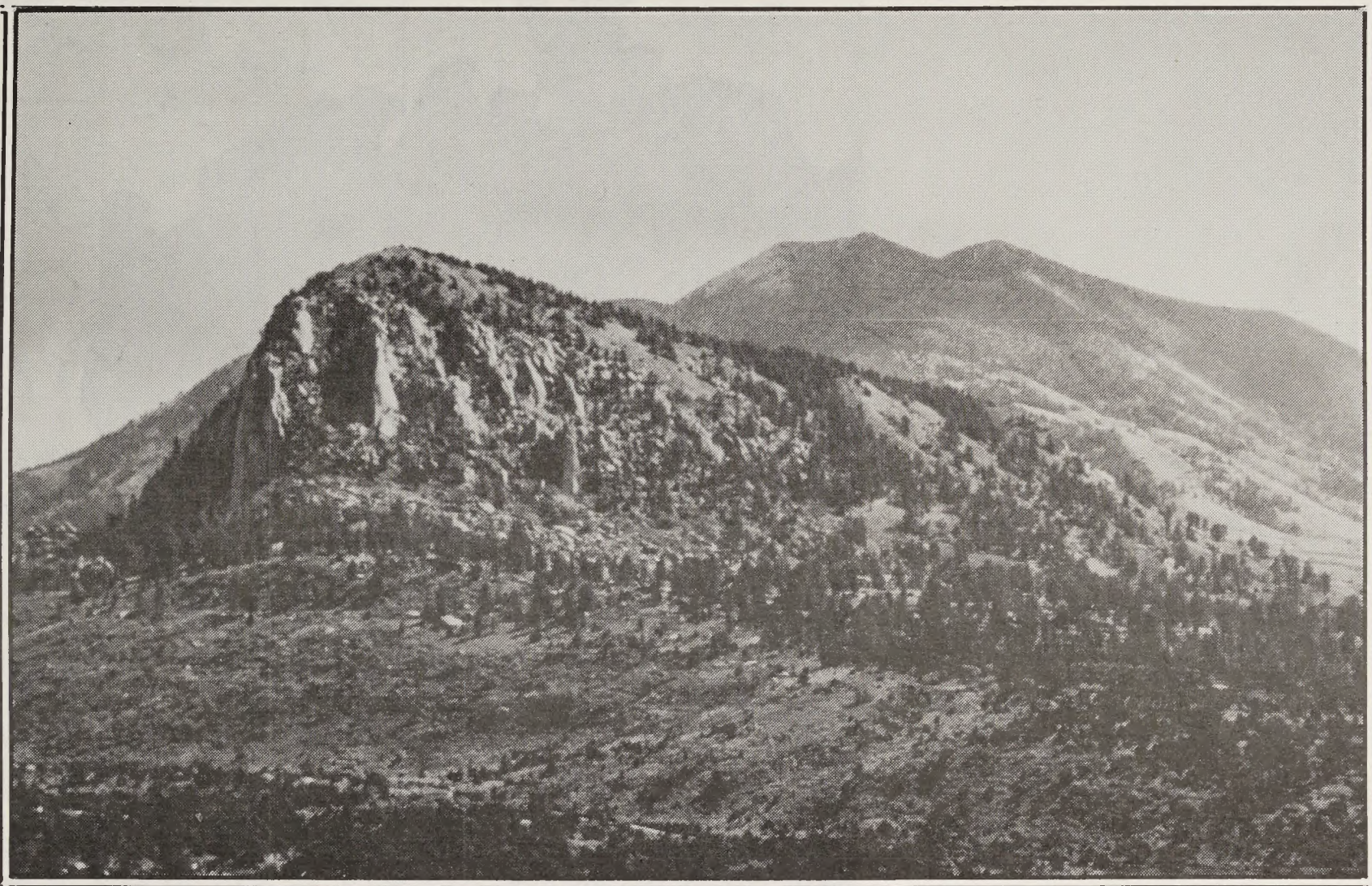
FIDDLER BUTTE WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 37 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 32 S., R. 15 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 32 S., R. 15 E., Sec. 32	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Mt. Pennell WSA



MT. PENNELL WSA

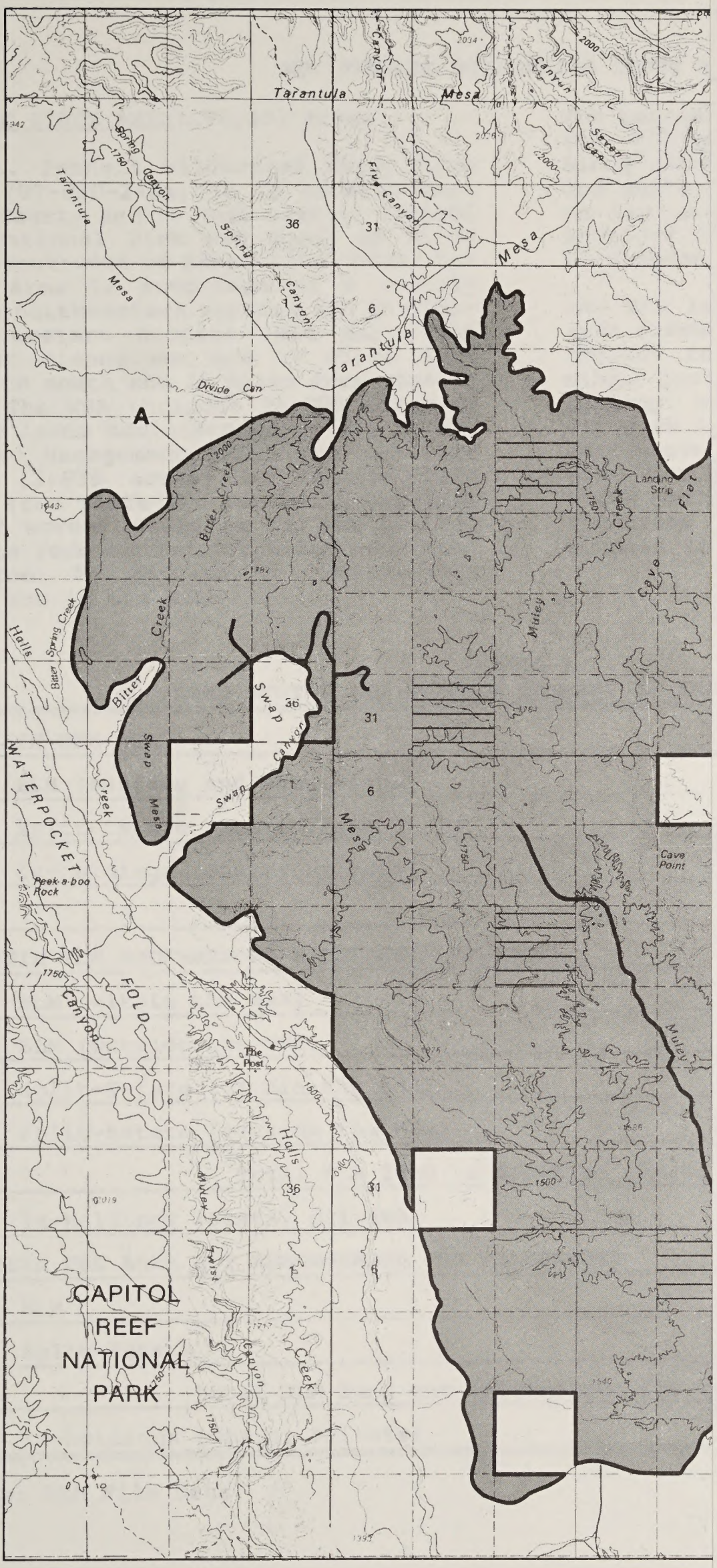
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R. 9 E.

T. 33 S.

T. 34 S.

T. 35 S.



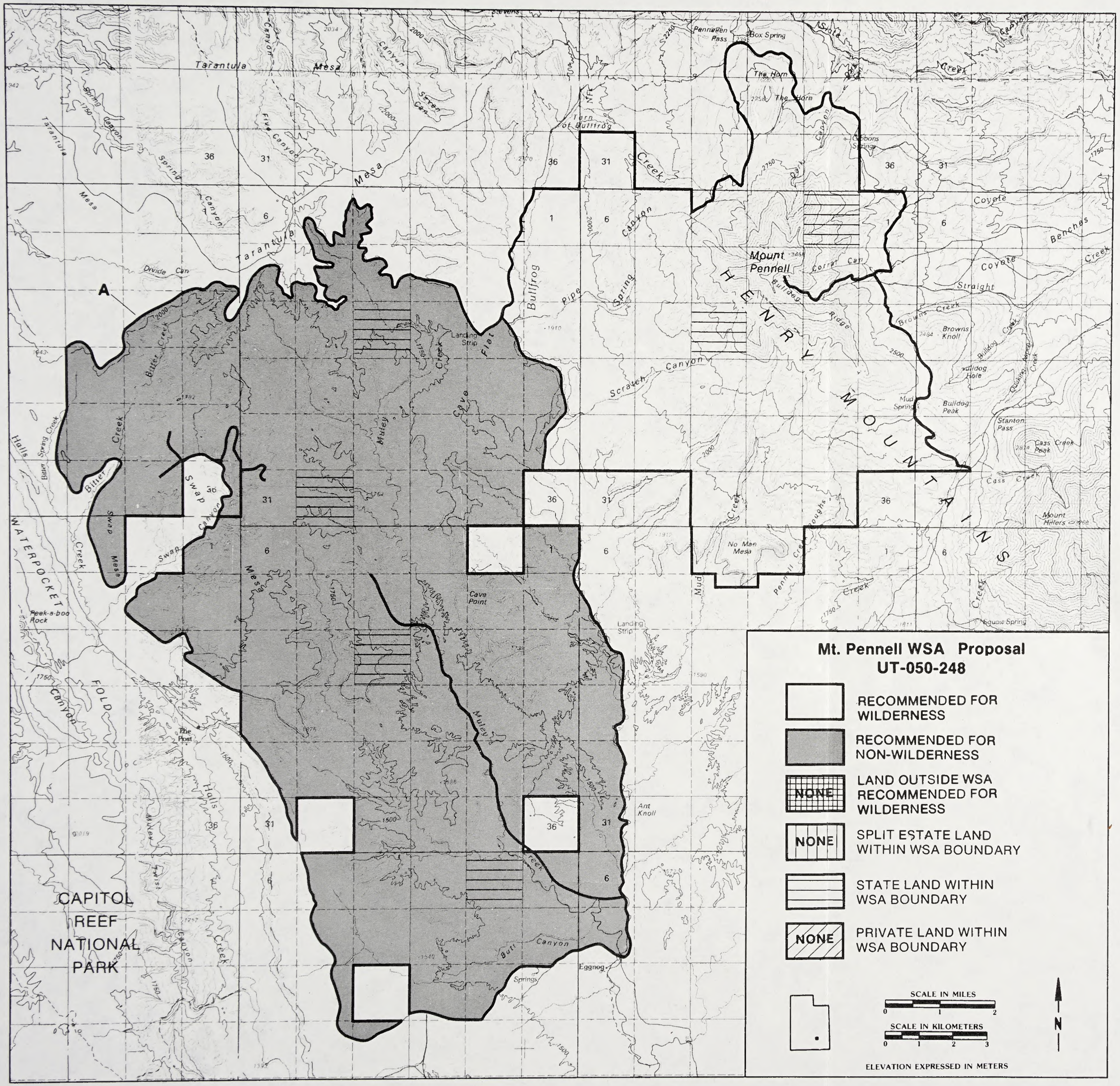
MT. PENNELL WSA

R. 8 E. R. 9 E. R. 10 E.

T. 33 S.

T. 34 S.

T. 35 S.



Mt. Pennell WSA Proposal
UT-050-248

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES 0 1 2

SCALE IN KILOMETERS 0 1 2 3

N

ELEVATION EXPRESSED IN METERS

October 1991

MT. PENNELL WILDERNESS STUDY AREA

1. THE STUDY AREA: 74,300 acres

The Mt. Pennell Wilderness Study Area (WSA) (UT-050-248), is in eastern Garfield County and is just east of Capitol Reef National Park and about 30 miles south-southwest of Hanksville, Utah. The study area is comprised of a roughly square northeastern section and an elongated western section (see Map). The longest dimensions are 17 miles from north to south and 16 miles from east to west. The WSA includes 74,300 acres of public lands administered by the Bureau of Land Management (BLM) and six sections (3,836 acres) of inheld State lands (see Table 1). Two State sections (1,277 acres) would be in the portion that is recommended for wilderness designation. No private or split-estate lands are in the WSA.

The boundary of the portion recommended for wilderness designation is mostly along roads and ways on the east, west, and north sides and along section lines on the south side that exclude State sections but still include terrain with wilderness values.

The WSA is in the Henry Mountains, an area classic in the history of American geology for studies of igneous intrusion, geologic structure, and geomorphology. Mt Pennell is the second highest peak in the Henry Mountains (11,371 feet above sea level). Several deep canyons cut the sides of the mountain, which on the higher slopes supports oak, Ponderosa pine, subalpine fir, spruce, Douglas fir, and aspen.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	74,300
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,836
Total	78,136
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	25,800
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	25,800
In-holdings (State, private)	1,277
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	48,500
Split-Estate	0
Total BLM land not recommended for wilderness	48,500
In-holdings (State, Private)	2,559

Source: BLM File Data

Vegetation in the lower elevations is mostly pinyon-juniper and associated grasses. The Henry Mountains bison herd inhabits the WSA and vicinity.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and is included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 25,800 acres would be designated as wilderness and the remaining 48,500 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
25,800 acres
(recommended for wilderness)
48,500 acres
(recommended for nonwilderness)

The recommendation for this WSA is to designate 25,800 acres as wilderness and to release the remaining 48,500 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. BLM recommends that the cherry-stemmed road on Bulldog Ridge be extended to an existing communication right-of-way and that the communication site be enlarged to about 200 feet by 200 feet to allow for a microwave tower that would provide telephone service to the community of Caineville and the ranches in the Notom Road area.

This recommendation for wilderness will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides information on acquisition.

The portion of the WSA recommended for wilderness is that part of the WSA that contains the best wilderness values. Essentially all of the area recommended for wilderness designation is natural and about 69 percent has outstanding opportunities for solitude and primitive recreation. Little or no conflict with mineral-related or other land uses would occur. Mt. Pennell is the second highest peak in the Henry Mountains. From atop of its summit at 11,371 feet, stunning vistas can be seen all the way to Capitol Reef National Park. Mt. Pennell crowns an area of great topographic and ecological diversity. It is an awe-inspiring landscape of badlands, mesas, and mountains. On the higher slopes one can find stands of oakbrush, aspen, and fir trees. Perennial streams and springs support riparian vegetation. All of the recommended area is crucial-critical deer and/or bison range. Mountain lions, coyotes, bald eagles, and peregrine falcons also provide visitors a sensation of being in wilderness.

Much of the opposite is true for the area not recommended for wilderness. More than 93 percent of this area is considered natural, but outstanding opportunities for solitude and primitive recreation are lacking. BLM believes that wilderness values are of a high quality in areas where outstanding opportunities for solitude and/or primitive recreation exist, preferably in combination with special features. In forming this recommendation, the portions of the WSA with outstanding opportunities for solitude and primitive recreation and special features were included where possible within a manageable boundary. More than 13 million tons of coal probably occur in this portion of the WSA. Bison roam the area, but only 1,270 acres in the coal-bearing portion of the WSA are classified as unsuitable for surface mining. Extraction of the coal in the short term is unlikely but coal mining may occur in the long term.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man

exhibit no cumulative impact that is substantially noticeable. About 25,790 acres in the area recommended for wilderness designation are natural; only 10 acres do not meet the standards for naturalness.

Most of the eastern portion of the WSA is in a natural condition. Four miles of road south of Mt. Pennell have been cherry-stemmed and are not part of the WSA. Several cabins used for mining claim assessment work, at the northeastern edge of the recommended portion, affect naturalness on 10 acres of the WSA.

More than 93 percent (45,200 acres) of the remainder of the WSA are natural, but opportunities for solitude and primitive recreation are not outstanding.

B. Solitude

About 17,800 acres (69 percent) of the recommended portion meet the standards for outstanding opportunities for solitude. Mt. Pennell, with several prominent ridges and deep canyons on all sides, provides significant screening for visitors. Screening is further enhanced by scattered pinyon, juniper, aspen, and scrub oak on the southern slopes and spruce, fir, pine, and aspen on the northern slopes. The summit of Mt. Pennell provides vistas of hundreds of square miles of desert, with little or no sign of human activity.

Most of the portion not recommended for designation is relatively flat and vegetation is generally too sparse to provide screening, hence opportunities for solitude are not outstanding.

C. Primitive and Unconfined Recreation

About 17,800 acres or 69 percent of the recommended area, meet the standards for outstanding opportunities for primitive and unconfined recreation as well as for solitude. Backpacking and hiking opportunities are excellent because of easy access, the size of the area, and the variety of terrain. Hiking routes allow access to the summit of Mt. Pennell, from which views of parts of southern Utah and features in Colorado and Arizona are possible. The Horn, a prominent outcrop on the north end of the WSA, offers excellent opportunities for technical rock climbing because of easy access and a wide variety of technical difficulty; it perhaps provides the best climbing opportunities in central Utah. Because of the nature of the WSA, opportunities for photography and geologic and biologic observations are outstanding.

In the portions of the WSA not recommended for wilderness designation, opportunities for primitive recreation are not exceptional, although the free-roaming bison in the WSA and vicinity are frequently seen in summer and fall.

D. Special Features

Four distinct biological life zones are within the WSA due to nearly 5,000 feet of change in elevation. Although the presence of bison in the WSA in summer is part of the naturalness of the WSA, their appearance is also considered to be a special feature.

Portions of the WSA are summer range for the Henry Mountain bison herd, and bison are frequently seen in the vicinity of The Horn. Cougar, a wildlife species associated with wilderness, inhabit the WSA. Peregrine falcons and bald eagles, listed as endangered species and five animal species that are considered sensitive may inhabit or use the WSA.

One plant species (Sclerocactus wrightiae) which is listed as endangered and three plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. Four types of PNV would be expected to develop in the WSA: Juniper-pinyon woodland (46,000 acres), Arizona pine forest (6,300 acres), saltbush-greasewood (20,000 acres), and spruce-fir-Douglas fir (2,000 acres).

The first three types of PNV are represented in the NWPS nationally but only juniper-pinyon woodland is currently represented in the NWPS in Utah. Colorado Plateau spruce-fir-Douglas fir is not represented at all in the NWPS, nor is the combination of the four types of PNV. A significant number of all types is represented in other BLM study areas except for spruce-fir-Douglas fir, which would be found in only one other WSA in Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,098,005
Arizona Pine Forest	3	26,300	8	13,750
Saltbush-Greasewood	1	20,000	17	374,003
Spruce-Fir-Douglas Fir	0	0	2	4,000
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,660,198
Arizona Pine Forest	0	0	8	13,750
Saltbush-Greasewood	1	20,000	17	374,003
Spruce-Fir-Douglas Fir	0	0	2	4,000

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mt. Pennell WSA could contribute to balancing the geographic distribution of areas within the NWPS in the Colorado Plateau region. There are three designated wilderness areas within 100 miles of the WSA. In a clockwise direction beginning to the east, are the 45,000-acre Dark Canyon Wilderness (U.S. Forest [FS]), the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM), and to the west the 25,751-acre Box-Death Hollow Wilderness (FS). No designated wilderness areas are within 150 miles north of the Mt. Pennell WSA. In the Colorado Plateau, there are only 34 areas comprising 1,786,538 acres, or about 13 percent of the total wilderness area in the seven state Rocky Mountain-Intermountain Region.

Designation of the WSA would not contribute to the NWPS in the Four Corners Region, however. In the Four Corners states (Utah, Arizona, Colorado, and New Mexico), as of January 1987, there were 117 designated wilderness areas comprising 6,988,052 acres.

Manageability (The area must be capable of being managed effectively to preserve its wilderness character.)

The entire WSA can be managed as wilderness to preserve overall the values now present in the area. Current uses such as livestock grazing and maintenance of a corral, 4 miles of fence, 6 miles of pipeline, seven livestock reservoirs, two wells, and two rangeland exclosures would continue with only minimal effect on wilderness values. Only the corral, 2 miles of fence, and one reservoir would be in the area recommended as wilderness.

There are no oil and gas leases or other leases in the WSA and new leases would not be issued if the area is designated wilderness.

In the area recommended for wilderness there are 1,080 acres in 54 mining claims. Because of the potential for locatable minerals and the presence of grandfathered mining operations on Bulldog Ridge it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed in the wilderness. Such developments will probably be small and would disturb only about 25 acres of the recommended area following wilderness designation. Some of these activities would be visible from terrain surrounding Mt. Pennell and there would be slight reductions in the wilderness quality of the area. The presence of two State sections (1,277 acres) in the recommended area could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. Because there is some potential for locatable minerals in the WSA, it is projected that in the foreseeable future there would be at least some exploration on State lands that could reduce wilderness values in small parts of the recommended wilderness.

The area not recommended for wilderness would be more difficult to manage for wilderness values than the recommended area because there are more mining claims, i.e. 173, covering 3,460 acres, and there are four in-held State sections (2,559 acres) where mineral exploration is likely. Additionally, there is a cherry-stemmed road to the center of the area and six additional sections of State land cherry-stemmed from the area.

The WSA can be managed reasonably as wilderness to preserve values now present in the area. Only two State sections (1,277 acres) are within the area recommended for wilderness, which would reduce management concerns regarding access or acquisition of these lands. Both sections are leased for grazing, which is compatible with authorized use of BLM lands for 891 cattle and sheep animal unit months (AUMs). The State section southwest of Mt. Pennell is leased for oil, gas, and hydrocarbons, but it is believed that the potential for fluid hydrocarbons in the WSA is low and known coal deposits are in the portion of the WSA not recommended for wilderness. The other State section, on the northeastern slopes of Mt. Pennell, has a metalliferous lease. Access to this section could be available from a State section diagnally adjacent to the northeast, on which there are roads. The likelihood of mineral development is considered to be low, however.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) assessed the mineral and energy resource potential in the portion of the WSA that is recommended for wilderness designation (25,800 acres) and prepared a mineral assessment report for the Mt. Pennell WSA (USGS Bulletin 1751-D, Russell F. Dubiel, et al., 1990). The report indicates that subeconomic measured coal resources of approximately 1.3 million tons occur within the western boundary of the area that was studied. The central portion of the area studied has a moderate mineral resource potential for copper, lead, tin, molybdenum, and zinc, and for silver and gold; the remainder of the area has a low resource potential for these metals. The central part of

the area has a low mineral resource potential for uranium and vanadium. The remainder of the study area has a moderate mineral resource potential for uranium and vanadium. The central part of the study area underlain by igneous rocks has a low mineral resource potential for coal; all of the area outside of this central part has a moderate resource potential except in the extreme western part, where the resource potential for coal is high. The entire area that was studied has a low resource potential for oil and gas and for geothermal energy.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation of the area as wilderness.

Local Social and Economic Considerations

With BLM's partial wilderness recommendation some potential mineral leases and claims would be precluded in the area designated as wilderness, and related future economic conditions could be altered from what they would be without designation. Because the likelihood of mineral development is low, however, and 65 percent of the WSA would not be designated and fewer restrictions would be placed on mineral-related activities, mineral-derived income would probably not be significantly reduced.

Proposed rangeland improvements on 1,200 acres would be precluded, preventing a future increase of 92 AUMs, $1,840 in livestock sales, and $460 ranchers' in labor and investment returns. This would not be significant on a County or regional level.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 230 inputs specifically addressing this WSA were received from 544 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 223 commenters supported wilderness designation for part or all of the WSA, while 313 commenters were opposed. Eight commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features in the WSA, protection of wildlife and wildlife habitat and cultural resources, and relative lack of nonprimitive recreation and mineral conflicts. The majority of those commenting in favor of wilderness were from urban Utah and other states.

Those opposing wilderness were concerned that wilderness designation would preclude mineral exploration and development, livestock grazing, other uses, and access by the public except for special groups; harm State and local economies; would not be compatible with multiple use; and that the Mt. Pennell WSA is de facto wilderness and other kinds of management in lieu of wilderness would be adequate. The majority of commentors opposing wilderness designation were from rural Utah.

One Federal agency, the National Park Service (NPS), commented on the Draft EIS for this WSA. The NPS commented that there were no clear rationale provided in the Draft EIS for why the proposed wilderness alternative was chosen. The NPS stated that the proposed wilderness in many of the WSAs, including Mt. Pennell, were drastically reduced in size when there is no real difference in impacts of the various alternative. The NPS also pointed out that Mt. Pennell should be included in the list of WSAs that adjoin NPS areas, as the WSA adjoins Capitol Reef National Park.

No comment letters were received on the Final EIS.

There are six State in-holdings (3,836 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State noted that there were inconsistencies in the discussion of State lands and the drawing of WSA boundaries relative to State lands. The State also commented that the geology section was inadequate and that BLM's proposed action had been mislabeled. According to the State, the Mt. Pennell WSA is ranked as having both high wilderness values and high conflicts compared with other WSAs in the region. In their opinion, the 25,800-acre partial wilderness alternative would avoid most of the conflicts. However, and additional adjustment on the southwest side of the WSA was favored by the State to allow for a 1,183-acre chaining project for wildlife and livestock.

The Mt. Pennell WSA is in Garfield County. The Garfield County Master Plan covers this WSA. In the plan, Garfield County proposed that 142,653 acres in three BLM and one FS area be recommended to the Utah Congressional delegation as wilderness. The county plan recommends that the remaining lands within the county, including the Mt. Pennell WSA, be retained for multiple uses.

The County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

MT. PENNELL WSA

Table 3
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (25,800 Acres)	No Action/No Wilderness	All Wilderness (74,300 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 35 percent of the WSA. Naturalness and opportunities for solitude and primitive recreation would be directly lost on 26 acres because of locatable mineral exploration and development and construction of access roads to in-held State sections, and would be indirectly reduced in quality on up to an additional 1,486 acres of the WSA. Special features would be largely protected. Some Class A scenery would be reduced in quality. Vehicular use of 19 miles of ways in the nondesignated portion would continue to detract from opportunities for solitude and primitive recreation in the WSA. This alternative would not complement the NPS proposal for wilderness management in the contiguous Capitol Reef National Park.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 1,267 acres of the WSA because of locatable mineral exploration and development, rangeland development, and construction of access roads to in-held State sections. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 7,430 acres. Wildlife would benefit from rangeland developments and water and vegetation treatments. Some Class A scenery would be reduced in quality. Vehicular use of 22 miles of ways and mining-related roads would detract from opportunities for solitude and primitive recreation. This alternative would not complement the NPS proposal for wilderness management in the contiguous Capitol Reef National Park.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 26 acres of the WSA because of locatable mineral exploration and development and construction of access roads to in-held State sections, and would be indirectly reduced in quality on an additional 1,486 acres of the WSA. Special features would be protected. Some Class A scenery would be reduced in quality. This alternative would complement the NPS proposal for wilderness management in the contiguous Capitol Reef National Park.
Impacts on Soils	Erosion and soil loss would remain at present levels because only 26 acres of surface disturbance would occur.	There would be less than a 1-percent increase in soil loss with this alternative as a result of mineral exploration and development.	Erosion and soil loss would remain at present levels because only 26 acres of surface disturbance would occur.
Impacts on Vegetation	Special status species and vegetation types would receive additional protection on 35 percent of the WSA. Impacts on these resources from projected surface disturbance would not be significant because less than 1 percent of the WSA would be disturbed.	The 1,267 acres of projected disturbance would affect less than 1 percent of the WSA and would alter 5 percent of the pinyon-juniper woodland in the WSA. The viability of populations of special status species would be maintained.	Vegetation types and special status species would be protected by this alternative because the potential for surface disturbance would be reduced.
Impacts on Mineral and Energy Exploration and Production	This alternative would limit potential exploration for locatable minerals. The potential for production of small amounts of locatable minerals would be foregone.	This alternative would not adversely affect or further restrict mineral and energy resource exploration and production in the WSA because mineral leasing, location of mining claims, and mineral developments could occur without restriction for protection of wilderness values.	Wilderness designation would limit potential exploration and development opportunities for locatable minerals. The potential for production of small amounts of locatable minerals could be foregone.

MT. PENNELL WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (25,800 Acres)	No Action/No Wilderness	All Wilderness (74,300 Acres)
Impacts on Wildlife Habitat and Populations	There would be no significant impacts to wildlife populations. Wildlife habitat and populations would receive additional protection and would benefit from solitude on 35 percent of the WSA. A slight increase in bison forage (40 AUMs) would not be possible. The bison population would remain at present levels.	There would be no significant adverse impacts to wildlife habitat or populations. A slight increase in bison forage (40 AUMs) could be achieved. The bison population would increase.	The wildlife species would be protected by this alternative. A small increase in bison forage (40 AUMs) would not be realized. The bison population would remain at present levels.
Impacts on Livestock Management	Current levels of grazing use would not be affected. A small increase in livestock AUMs (92) would be precluded. Operating costs would increase slightly because of restrictions on access to 3 miles of ways and five sheep camps.	Livestock management would not be affected and a small increase in use (92 AUMs) would be made.	Wilderness designation would not affect current grazing levels but would affect management and supervision of livestock. Restrictions on the use of the 22 miles of ways in the WSA would be an inconvenience to 17 livestock permittees and would result in slight increases in the cost of management. Access to the sheep camps would be restricted. A 1,200-acre chaining and seeding with a potential for production of 92 AUMs of livestock forage and one livestock reservoir would be precluded.
Impacts on Visual Resources	Visual quality would be protected on the designated portion which is 35 percent of the WSA. Direct loss of visual quality would occur on less than 1 percent (26 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 2 percent (1,486 acres).	Direct loss of visual quality would occur on less than 2 percent (1,267 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 10 percent (7,430 acres).	Visual quality would be protected throughout the WSA. Direct loss of visual quality would occur on much less than 1 percent (26 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 2 percent (1,486 acres) of the WSA.
Impacts on Visual Resources	Visual quality would be protected on the designated portion which is 35 percent of the WSA. Direct loss of visual quality would occur on less than 1 percent (26 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 2 percent (1,486 acres).	Direct loss of visual quality would occur on less than 2 percent (1,267 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 10 percent (7,430 acres).	Visual quality would be protected throughout the WSA. Direct loss of visual quality would occur on much less than 1 percent (26 acres) of the WSA from disturbance and an indirect perceived loss would occur on up to an additional 2 percent (1,486 acres) of the WSA.

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation Partial Wilderness (25,800 Acres)	No Action/No Wilderness	All Wilderness (74,300 Acres)
Impacts on Cultural Resources	Thirty-five percent of the WSA including six recorded sites would receive protection as a result of wilderness designation under this alternative. Over the long term, protection from most surface disturbance would probably outweigh increased potential for vandalism associated with increased visitation. The nondesignated area, including 46 recorded sites, would continue to be protected under existing laws. In this area, intentional vandalism and artifact collection may increase due to increased activity and accessibility.	Inadvertent loss or damage to archaeological sites may occur due to mineral exploration, surface development, and/or continued ORV use. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resource sites could be managed without restrictions for protection of other wilderness values.	Over the long term, protection from most surface disturbance would probably outweigh increased potential for vandalism. Closure of all vehicular access would protect sites from damage and decrease accessibility in the unit.
Impacts on Recreation	Primitive recreational opportunities would be preserved in the 25,800-acre designated area. Primitive recreation values could be reduced in quality on the 48,000-acre nondesignated area through continued vehicular use of 19 miles of ways. Most of the WSA would be available for motorized hunting. Both primitive and motorized recreational use would increase.	The quality of primitive recreation opportunities would be reduced by mineral exploration, chaining and seeding, and continued use of 22 miles of ways. Both primitive and motorized recreational use would increase.	This alternative would benefit primitive recreation by reducing the likelihood for surface-disturbing activities and increasing management attention and recognition of recreational values. Approximately 645 visitor days per year of motorized recreational use now occurring on 22 miles of ways would be foregone. Therefore, access for hunting would be more difficult. Primitive recreational use would increase but overall recreational use may initially decrease. Over the long term, visitation would increase.
Impacts on Economic Conditions	This alternative would result in temporary impacts on local economic conditions through a reduction of 32 jobs in the locatable mineral industry that would be possible with the No Action/No Wilderness Alternative. Otherwise, economic conditions would not be significantly affected.	Present economic conditions would not be affected. Mineral activity in the foreseeable future could result in an increase of 48 jobs or a 2.4-percent increase in employment for Garfield County or a 6-percent increase in Wayne County.	Wilderness designation would result in temporary impacts on local economic conditions through a reduction of 32 jobs in the locatable mineral industry that would be possible with the No Action/No Wilderness Alternative. Otherwise, economic conditions would not be significantly affected.

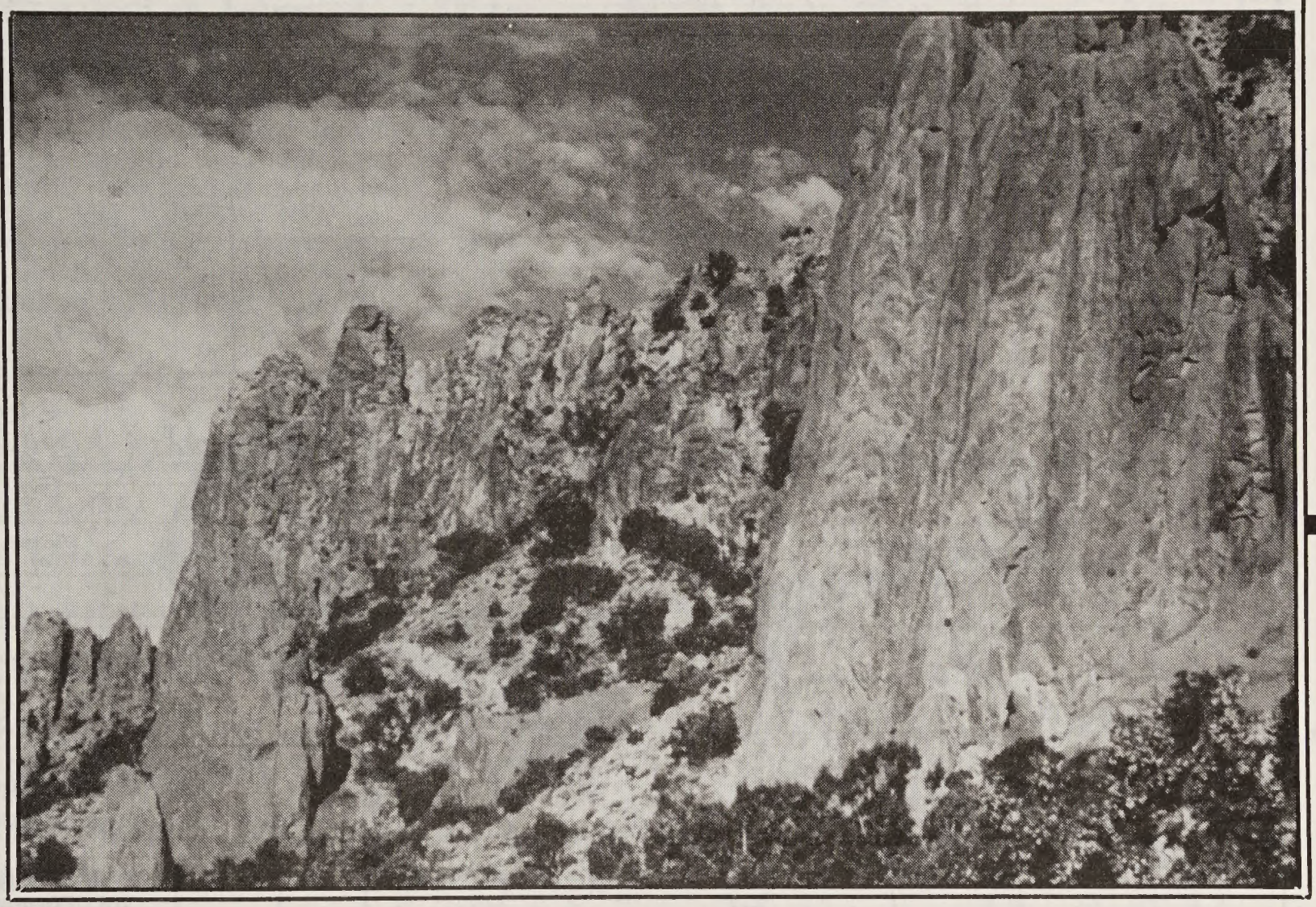
MT. PENNELL WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 33 S., R. 10 E., Sec. 2	637.20		State	State	No	Exchange		$2,000
T. 33 S., R. 10 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Mt. Hillers WSA



MT. HILLERS WSA

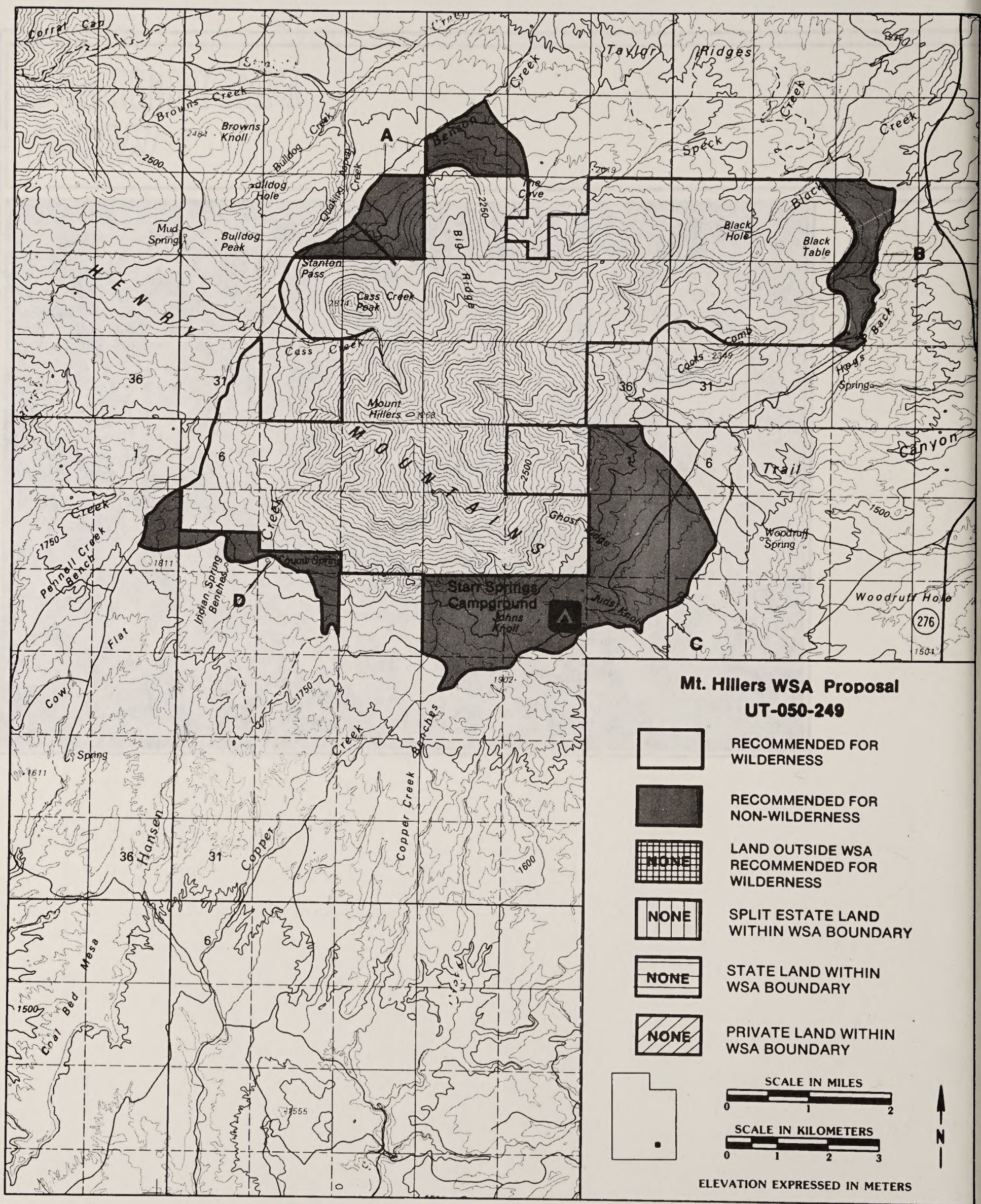
R. 11 E.

R. 12 E.

T. 33 S.

T. 34 S.

T. 35 S.



Mt. Hillers WSA Proposal
UT-050-249

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- NONE — STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

N

ELEVATION EXPRESSED IN METERS

October 1991

MT. HILLERS WILDERNESS STUDY AREA

1. THE STUDY AREA: 20,000 acres

The Mt. Hillers Wilderness Study Area (WSA) (UT-050-249) is in northeastern Garfield County, about 30 miles south of Hanksville, Utah. The study area is about 7 miles long from north to south and 7 miles wide from east to west. The boundaries of the WSA are along roads and section lines of private and State lands (see Map). The boundary of the partial wilderness area that is recommended for designation essentially parallels the WSA boundaries, but excludes all State lands and was defined to include most of the wilderness values in the WSA. The Mt. Hillers WSA is immediately east of the Mt. Pennell WSA (UT-040-248) and about 3 miles west of the Little Rockies WSA (UT-040-247).

The WSA contains 20,000 acres of public land administered by the Bureau of Land Management (BLM). No non-Federal lands are inheld within the WSA.

Mt. Hillers is a rugged peak with steep slopes carved by narrow canyons. Characteristic of the Henry Mountains, the Mt. Hillers is an igneous intrusion emplaced in a thick sequence of sedimentary rocks, which were deformed and faulted. Mt. Hillers is 5 to 6 miles across, and is cut by several radial narrow, steep, V-shaped valleys separated by elongated, jagged ridges. Hogbacks formed from upturned sedimentary rocks flank the mountain, and are vertical in the Pink Cliffs area. Elevations range from about 5,000 feet at the northeastern edge of the WSA to 10,723 feet at the summit of Mt. Hillers.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	20,000
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	20,000
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	16,360
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	16,360
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	3,640
Split-Estate	0
Total BLM land not recommended for wilderness	3,640
In-holdings (State, Private)	0

Source: BLM File Data

Vegetation is predominantly sagebrush and pinyon-juniper woodlands on the southern slopes, and ponderosa pine, Douglas fir, and bristlecone pine on the northern and the higher slopes. The Henry Mountains are believed to be at the southeastern limit of growth for the Great Basin variety of bristlecone pine.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 16,360 acres would be designated as wilderness and the remaining 3,640 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
16,360 acres
(recommended for wilderness)
3,640 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 16,360 acres as wilderness and to release the remaining 3,640 acres for uses other than wilderness (see Map). Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

All of the area recommended is in a natural state. Mt. Hillers is the third highest peak in the Henry Mountains. The exposed igneous ridges of Mt. Hillers along with the Pink Cliffs and large slabs of Navajo Sandstone tilted up by the igneous intrusion on the south slope of the mountain are highly scenic, geologically interesting, and appear untouched. Buffalo graze while roaming through stands of aspen, spruce, fir, ponderosa, and bristlecone pine trees that grow on the steep slopes of this picturesque mountain. Approximately 83 percent (16,608 acres) of the WSA, including all of the area recommended as wilderness, is rated Class A for scenic quality. About 92 percent of the area has outstanding opportunities for solitude and primitive recreation. The diversity of vegetation and presence of water add value and interest to the recommended portion of the WSA.

The portion of the WSA (Areas A through D) that is not recommended for wilderness designation comprise the locations at the base of Mt. Hillers where opportunities for solitude and primitive recreation are not outstanding or are lacking. Generally, these are areas of pinyon-juniper vegetation typical of the lower elevations in the region. BLM believes that wilderness values are of a high quality in areas where outstanding opportunities for solitude and/or primitive recreation exist, preferably in combination with special features. In forming this recommendation, the portions of the WSA with outstanding opportunities for solitude and primitive recreation and special features were included where possible within a manageable boundary.

Area C excludes Starr Springs Campground so that the campground could be expanded and maintained using motorized equipment. In addition, moving the boundary on the south end near Starr Springs a 0.5 mile to the north along the section line, moves the boundary off the alluvial slopes where most of the grazing occurs.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. About 19,000 acres of this WSA are in a natural condition. Approximately 3.5 miles of way and the Starr Springs Campground detract from the naturalness of the remaining 1,000 acres. The ways are in the Cass Creek Peak area, north of Big Ridge, and

at Ghost Ridge. The way at Ghost Ridge could be rehabilitated by natural processes. The ways are substantially unnoticeable.

In November 1988, unauthorized mining claim assessment work disturbed less than a 0.2 acre on about a 0.75 mile of an old trail beyond the cherrystem in the vicinity of Cass Creek Peak. This site is being rehabilitated to a substantially unnoticeable condition.

B. Solitude

Overall, opportunities for solitude are outstanding on 15,630 acres and less than outstanding on about 4,370 acres on the lower benchlands, where screening by terrain and vegetation is limited.

Opportunities for recreationists to find solitude (i.e., a secluded spot away from others) within the WSA are influenced by size, topography, vegetation, and the absence of distracting sights and sounds.

The WSA consists of a large central peak, Mt. Hillers, with several prominent satellite peaks on ridges that radiate away from the central peak. The ridges are separated by at least 10 drainages reaching far up the mountain. Most of these are irregular in shape. On the mountain top, there is room for several groups to occupy proximate areas and be unaware of each other. Thick stands of spruce, fir, pine, and mountain mahogany on the north slope further screen users from each other.

Feelings of solitude and isolation are enhanced by the size and configuration of the WSA and the vistas of central Utah at the summit. Due to distance, topography, and vegetation, few, if any, marks of man are visible. One exception is the wildlife chaining projects on Coyote Benches outside the WSA.

C. Primitive and Unconfined Recreation

Opportunities for primitive, unconfined recreation are outstanding on 15,630 acres of the WSA. Portions of the WSA along the lower benchlands offer limited opportunities on approximately 4,370 acres.

Hiking opportunities are particularly challenging. The summit of Mt. Hillers is the most difficult to reach in the Henry Mountains.

D. Special Features

The WSA has geological and scenic special features, including scenic views and geologic formations of stocks and laccoliths. Approximately 83 percent (16,608 acres) of the WSA has outstanding scenic values.

Portions of the WSA are used by the Henry Mountain bison herd. Bald eagles and peregrine falcons, listed as endangered and five animal species considered as sensitive may occur in the WSA.

One plant species that is listed as endangered or threatened (Sclerocactus wrightiae) may be in the WSA. Three other special status plant species may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Arizona pine forest (3,000 acres), juniper-pinyon woodland (15,000 acres), and spruce-fir-Douglas fir forest (2,000 acres). Juniper-pinyon woodland PNV is well represented in the NWPS and in

other BLM study areas, both in and outside of Utah.

The Arizona pine forest PNV is represented in the NWPS only outside of Utah. Spruce-fir-Douglas fir PNV is not currently represented at all in the NWPS.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population center.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Arizona Pine Forest	3	26,300	8	17,050
Juniper-Pinyon Woodland	11	1,401,745	84	2,129,005
Spruce-Fir-Douglas Fir	0	0	2	4,000
UTAH (COLORADO PLATEAU PROVINCE)				
Arizona Pine Forest	0	0	8	17,050
Juniper-Pinyon Woodland	1	26,000	53	1,691,198
Spruce-Fir-Douglas Fir	0	0	2	4,000

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mt. Hillers WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah, Arizona, and Colorado.

A Mt. Hillers wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the west-southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the U.S. Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

With the exception of a small area around the Starr Springs Campground, the WSA can be effectively managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing and maintenance of 3.75 miles of fence and 1 mile of small diameter water pipeline, would continue with little or no effect on wilderness values. Only 1.75 miles of fence is in the area recommended for wilderness.

Even though there are 640 acres of post-FLPMA oil and gas leases in the WSA, all of which are in the recommended area, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

MT. HILLERS WILDERNESS STUDY AREA

There are 7,660 acres of mining claims in the WSA of which 5,740 acres in the recommended area and 1,920 acres in the area not recommended for wilderness. Because there is some potential for uranium deposits and other locatable minerals in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb only small areas (approximately 15 acres in the recommended portion and 14 acres in the area not recommended) following wilderness designation.

These activities would reduce the quality of wilderness values on portions of the surrounding wilderness but would not affect the over all manageability of the area.

Part of the area not recommended for wilderness would be difficult to manage because it includes the Starr Springs Campground where noise and activity on a graveled road and in the developed campsites would conflict with wilderness management.

There are no in-holdings or other valid rights within the WSA that would detract from wilderness management.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Mt. Hillers WSA (USGS Bulletin 1751-C, Russell F. Dubiel, et al., 1988). The report indicates that small occurrences of uranium and vanadium are present near the northeastern and southern boundaries of the study area, and that copper, gold, lead, and zinc also occur, but no identified resources of these commodities are present. Inferred subeconomic resources of the common variety materials, sand, gravel, and stone, are present in the WSA but have no unique qualities and are not likely to be developed. The eastern part of the WSA has a high potential for uranium and vanadium and a low mineral resource potential for all other metals, and for coal. The central part of the study area has moderate mineral resource potential for copper, lead, zinc, and gold, and low potential for uranium, vanadium, and coal. The western part of the WSA has moderate potential for coal, uranium, and vanadium, and low potential for all other metals. The entire WSA has low mineral resource potential for oil and gas and for geothermal energy.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Partial wilderness designation would result in temporary impacts on local economic conditions through a reduction of 34 short-term jobs and 5 long-term jobs that could be provided with the No Action/No Wilderness Alternative. Regional economic conditions would not be significantly affected.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 45 inputs specifically addressing this WSA were received from 433 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 84 commenters supported wilderness designation for part or all of the WSA, while 345 commenters were opposed. Four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values and special features contained in the WSA and noted

that designation protects wilderness values. The majority of those commenting in favor of wilderness were from urban Utah and other states.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development; restrict livestock management, public access, and flood/erosion control; wilderness management is not compatible with multiple use; the area would remain the same without wilderness designation which therefore is unnecessary; and that wilderness would conflict with other uses. Almost all of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the USBM and the National Park Service (NPS), commented on the Draft EIS for this WSA. The USBM noted that the BLM's Final EIS should include the findings of the USGS and USBM mineral investigations and those findings would be available in November 1988. These findings have been incorporated into the Final EIS and study report.

The NPS commented that there were no clear rationale provided in the Draft EIS for why the proposed wilderness alternative was chosen. NPS stated that the proposed wilderness in many of the WSAs, including Mt. Hillers WSA, were drastically reduced in size when there is no real difference in impacts of the various alternatives.

No comment letters were received on the Final EIS.

There are no State in-holdings in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State noted that in the geology section there was no mention of sedimentary formations present or of igneous rock types. The State believes that economic uranium deposits exist in the Shitamarine Canyon district south of Mt. Hillers and on Taylor Ridges, northeast of the WSA. The State also noted the possibility that small-scale, high-grade precious metals deposit in the WSA and that they should be considered. According to the State, Mt. Hillers has moderate to low wilderness values and moderate to low conflicts relative to other WSAs in the region. The State believes that important wilderness and wildlife values are present as well as conflicts with potential uranium and water resources. The State pointed out that livestock conflicts could be reduced by moving the boundary on the southend near Starr Springs a half mile to the north so that it runs along the section line.

The Mt. Hillers WSA is in northeastern Garfield County. The Garfield County Master Plan covers this WSA. In the plan, Garfield County proposed that 142,653 acres in three BLM and one FS area be recommended to the Utah Congressional delegation as wilderness. The County plan recommends that the remaining lands within the County, including the Mt. Hillers WSA, be retained for multiple uses.

The County Commission is opposed to designation of this WSA because they believe that there are commercial deposits of uranium and silver in the WSA that should not be handicapped by wilderness designation. The Commission pointed out that Garfield County's average family income is approximately 25 percent below the State average, and therefore the County cannot afford to bypass any possible future resource development opportunities. The County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

MT. HILLERS WSA

Table 3
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (16,360 Acres)	No Action/No Wilderness	All Wilderness (20,000 Acres)
	Alternatives		
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 82 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 75 acres of the WSA because of locatable mineral exploration and development, and indirectly reduced in quality on up to an additional 1,400 acres. Most of the impact would be in the nondesignated area. Special features would be preserved with the exception that some Class A scenery would be reduced in quality. Vehicular use of 2 miles of ways in the nondesignated portion would detract from opportunities for solitude and primitive recreation. Starr Springs Campground would be in the nondesignated area and management and expansion would not conflict with wilderness management.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 116 acres because of locatable mineral exploration and development and campground expansion and would be indirectly reduced in quality on up to 2,000 acres. Class A scenery would be reduced in quality in some of the disturbed areas. Vehicular use of future mining roads and 3.5 miles of vehicular ways would detract from opportunities for solitude and primitive recreation in the WSA. Visitor use would be mostly motorized in nature and would detract from wilderness values.	Wilderness designation would preserve wilderness values overall in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 29 acres because of locatable mineral exploration and development and would be indirectly reduced in quality on up to an additional 600 acres. Special features would be preserved overall, although some Class A scenery would be reduced in quality. Visitor use would be primitive in nature and managed to protect wilderness values. Operation of the Starr Springs Campground would not be consistent with wilderness management goals.
Impacts on Vegetation	Vegetation types and special status plant species would receive additional protection on 82 percent of the WSA. Impacts on these resources from projected surface disturbance would not be significant because less than 1 percent of the WSA would be disturbed.	The composition of vegetation types would be altered on less than 1 percent of the WSA and the viability of special status plant species would be maintained.	The vegetation types and special status plant species would be provided additional protection because the potential for surface disturbance would be reduced.
Impacts on Water Resources	Impacts and conclusions would be similar to those described in the No Action/No Wilderness Alternative because the degree and location of surface disturbance would be about the same.	This alternative would not alter present or future water quality and uses because most drainages are ephemeral and developments would be designed to mitigate or reduce erosion and sedimentation.	Wilderness designation may preclude development of additional water for the Starr Springs Campground, otherwise, it would not alter present or future water quality or uses.

MT. HILLERS WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (16,360 Acres)	No Action/No Wilderness	All Wilderness (20,000 Acres)
Impacts on Mineral and Energy Exploration and Production	This alternative would limit the potential exploration and development opportunities for locatable minerals in the designated area. Development would be limited to minerals under valid mining claims at the time of designation. Opportunities for production of significant amounts of locatable minerals would be foregone. No significant leasable mineral production would be precluded.	This alternative would not adversely affect mineral and energy resource exploration and production because mineral leasing, location of mining claims, and mineral developments would occur without restrictions for protection of wilderness values.	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Opportunities for production of significant amounts of locatable minerals would be foregone.
Impacts on Wildlife Habitat and Populations	There would be no significant impacts to wildlife or populations because less than 1 percent (75 acres) of the WSA would be disturbed. Wildlife would receive additional protection and would benefit from solitude on 82 percent of the WSA.	Wildlife habitat or populations. would not be significantly affected. Approximately 1 percent of the crucial deer summer range or limited value year-long bison range in the WSA would be disturbed.	The wildlife species would be protected by this alternative and would benefit from additional solitude.
Impacts on Visual Resources	Visual quality would receive additional protection on 82 percent of the WSA. Visual quality on 15 acres in the designated area and 60 acres in the nondesignated area would be degraded with this alternative. Indirect reduction of visual quality would occur on up to 1,400 additional acres.	Visual quality would be directly reduced in quality on 96 acres due to mineral-related disturbance and indirectly reduced in quality on up to an additonal 2,000 adjacent acres.	Visual resources would be preserved overall by this alternative. Direct loss of visual resources would occur on 29 acres as a result of mineral activities. The qualtiy of visual resources could be reduced on an additional 600 adjacent acres of the WSA where disturbance would be visible.

MT. HILLERS WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (16,360 Acres)	No Action/No Wilderness	All Wilderness (20,000 Acres)
Impacts on Cultural Resources	Eighty-two percent of the WSA including 12 recorded sites would receive protection as a result of wilderness designation. Over the long term, protection from most surface disturbance would probably outweigh increased potential for vandalism. The nondesignated area including nine recorded sites would continue to be protected by existing laws and regulations. Inadvertent loss or damage to archaeological sites may occur in this area due to surface development and/or continued ORV use.	Inadvertent loss or damage to archaeological sites may occur due to surface disturbance and/or continued ORV use. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resources could be managed without restrictions for protection of other wilderness values.	Protection from most surface disturbance would probably outweigh any potential for increased vandalism. Closure to all vehicular access would protect sites from unintentional damage and decrease in accessibility in the unit.
Impacts on Recreation	Primitive recreation opportunities would be preserved overall in the designated area. Primitive recreation opportunities would be directly reduced in quality on about 75 acres of the WSA and would be indirectly reduced in quality on up to an additional 1,400 acres. Both primitive and motorized recreational use would increase. The Starr Springs Campground would be in the nondesignated area and could be expanded without conflicts with wilderness management.	Primitive recreation opportunities would be directly reduced in quality on 116 acres and indirectly reduced in quality on up to 2,000 acres more. Both primitive and vehicular recreational use would increase. Opportunities for mechanized-recreational activities would be improved with this alternative. The Starr Springs Campground could be expanded.	Primitive recreation opportunities would be preserved overall. Primitive recreation opportunities would be directly reduced in quality on 29 acres and indirectly reduced in quality on up to an additional 600 acres. Motorized recreational use (currently 542 visitor days per year) would be precluded. Expansion and motorized maintenance of the Starr Springs Campground would not be possible.
Impacts on Economic Conditions	Partial wilderness designation would result in temporary impacts on local economic conditions through a reduction of 34 short-term jobs and 5 long-term jobs that could be provided with the No Action/No Wilderness Alternative. Other economic conditions would not be significantly affected.	Present economic conditions would not be affected. In the foreseeable future, economic conditions would be affected by increased employment of 80 jobs over a short period due to mineral exploration. Mineral development would increase employment by 15 permanent jobs which is less than 1 percent of the present Garfield County employment or 1.8 percent of the present Wayne County employment. Other economic conditions would not be affected.	Current economic conditions would not be significantly affected. Wilderness designation would result in temporary impacts on local economic conditions through a reduction of 56 short-term jobs and 10 long-term jobs in the locatable mineral industry that could be provided with the No Action/No Wilderness Alternative. Other economic conditions would not be significantly affected.

Little Rockies WSA



LITTLE ROCKIES WSA

Little Rockies WSA
Proposal
UT-050-247

RECOMMENDED FOR WILDERNESS

NONE — RECOMMENDED FOR NON-WILDERNESS

NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY

STATE LAND WITHIN WSA BOUNDARY

NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

Little Rockies National Natural Landmark

GLEN CANYON NATIONAL RECREATION AREA

T. 33 S.

T. 34 S.

T. 35 S.

R. 11 E.

R. 12 E.

R. 13 E.

October 1991

LITTLE ROCKIES WILDERNESS STUDY AREA

1. THE STUDY AREA: 38,700 acres

The Little Rockies Wilderness Study Area (WSA) (UT-050-247) is in the Henry Mountains in eastern Garfield County, about 75 miles south of Hanksville, Utah. The WSA is elongated, and measures about 17 miles from north to south and 4 miles from east to west. The Glen Canyon National Recreation Area (GCNRA) borders the eastern side of the WSA and State Highway 276 borders the western side (see Map). The WSA contains 38,700 acres of public land administered by the Bureau of Land Management (BLM).

Two sections (1,280 acres) of State land are inheld within the WSA, but there are no other non-Federal lands (see Table 1). The Little Rockies were designated as a National Natural Landmark (NNL) in 1975 in recognition of the geologic values in the area.

The WSA includes two mountain peaks, Mt. Ellsworth and Mt. Holmes, which, like other peaks in the Henry Mountains, are bodies of igneous rocks that intruded and deformed overlying sedimentary layers.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	38,700
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,280
Total	39,980
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	38,700
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	38,700
In-holdings (State, private)	1,280
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The WSA is dominated by Mt. Ellsworth and Mt. Holmes, but in the northern and eastern portions it also includes high, narrow mesas cut by deep canyons. Elevations range from 4,000 feet to 8,235 feet at the crest of Mt. Ellsworth. Almost half of the WSA is bare rock outcrop; blackbrush and other shrubs are the dominant vegetative type in the remainder of the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report; and a no wilderness (no action) alternative.

2. RECOMMENDATION AND RATIONALE:
38,700 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will apply to any in-holdings acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition of in-holdings and split-estate minerals.

All of the area recommended is natural and about 72 percent has outstanding opportunities for solitude and primitive and unconfined recreation. Uranium deposits may exist in the WSA, but their development is unlikely. Gold and silver may occur in the southern part of the WSA, but the high wilderness values outweigh their significance.

Wilderness designation would be consistent with the 1975 designation of the area as a NNL, and would compliment management in the adjacent GCNRA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Most of this WSA is in a completely natural condition. This WSA consists of high narrow plateaus and mesas separated by deep slickrock canyons and the Little Rockies (Mt. Holmes and Mt. Ellsworth). These peaks were designated a NNL in 1975 for their outstanding geologic features. Trachyte Creek, a perennial stream, is located in the northern part of the study area, and numerous ephemeral streams in beautiful canyons either drain into Trachyte Creek or directly into Lake Powell. The study area contains an overwhelming array of slickrock and canyons. No human instrusions in the study area require rehabilitation. Since establishment of the WSA approximately one-third of an acre has been disturbed due to uranium exploration and drilling. This area has been reclaimed to a substantially unnoticeable condition.

The only human intrusion is a National Park Service (NPS) transmitter site atop Mt. Ellsworth. The transmitter site occupies less than 1 acre and is maintained by helicopter.

B. Solitude

Overall, the quality of opportunities for solitude meet the standards set by the Wilderness Act on 27,700 acres. Approximately 11,000 acres do not have outstanding opportunities for solitude. The excellent vistas of Lake Powell and central Utah from the summits of Mt. Holmes and Mt. Ellsworth give visitors a sense of solitude. Numerous steep-walled, narrow canyons such as Four Mile, Two Mile, Maidenwater, and Trachyte provide topographic screening.

Vegetation is sparse pinyon-juniper woodland and is not a factor in determining the degree of solitude. No sights and sounds outside the WSA interfere with a visitor's opportunity to feel secluded.

C. Primitive and Unconfined Recreation

Overall, opportunities for primitive and unconfined recreation meet the standards set by the Wilderness Act on 27,700 acres. The remaining 11,000 acres do not meet the standards.

The WSA has a diversity of recreational opportunities, including excellent opportunities for sightseeing, hiking, backpacking, camping, geologic study, and photography. Several interesting loop hiking routes are possible through challenging and varied terrain including both mountain peaks and canyons.

The NPS proposal for wilderness in the adjacent portion of GCNRA enhances the outstanding primitive recreation opportunities in the WSA. For example, hiking routes continue down the drainages to Lake Powell.

D. Special Features

The area has historical values in that several archaeological sites have been identified, and there is a high potential for the discovery of additional sites.

Portions of this WSA were designated as a NNL in 1975 because of the geologic values represented.

Approximately 98 percent of the WSA is rated as outstanding for scenic quality.

Because of the remote and isolated nature of portions of this WSA, there is high quality potential habitat for desert bighorn sheep. In January 1985, 21 desert bighorn sheep were introduced into the WSA by the Utah Division of Wildlife Resources (UDWR). This has increased the ecological values of the WSA. Bald eagles and peregrine falcons, listed as endangered species, and three special status animal species may occur in the WSA.

One plant species which is listed as endangered (Sclerocactus wrightiae) may occur in the WSA. In addition, two other special status plant species may also occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (15,480 acres) and juniper-pinyon woodland (23,220 acres). Blackbrush PNV is not represented in the NWPS either nationally or in Utah and is represented in other BLM study areas only in Utah.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Provo-Orem, Utah statistical metropolitan area. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of this population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The Little Rockies WSA would not contribute significantly to balancing the

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	214,584
Juniper-Pinyon Woodland	10	1,401,745	84	2,120,745
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	214,584
Juniper-Pinyon Woodland	1	26,000	53	1,682,978

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Provo-Orem, Utah	11	721,793	90	2,748,168

Source: BLM File Data.

geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah, Arizona, and Colorado.

A Little Rockies Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the west-southwest is the Box-Death Hollow 25,751-acre Wilderness. Both are administered by the U.S. Forest Service (FS). Also to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness administered by BLM.

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be effectively managed to preserve the wilderness values now in the area. Current uses and activities such as livestock grazing would continue but would not affect the wilderness values of the area. There are no private lands, rights-of-way or other valid rights in the WSA that would conflict with wilderness management.

There are no mineral leases in the WSA, and new leases would not be issued. There are presently 31 mining claims in the WSA covering 620 acres. Because there is some potential for uranium, silver and other locatable minerals in the WSA it is projected that a portion of these and future mining claims existing at the time of wilderness designation will be explored and possibly developed following designation. Disturbance from these activities would likely be small (less than 10 acres) and would not affect the overall manageability of the wilderness.

LITTLE ROCKIES WILDERNESS STUDY AREA

The presence of two State sections (1,280 acres) in the study area could create manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. Because there is some potential for locatable minerals in the WSA, it is projected that in the foreseeable future there would be at least some exploration on State lands that could reduce wilderness values in small parts of the recommended wilderness. The over all effect on wilderness management would be small.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Little Rockies WSA (USGS Bulletin 1751-A, Russell F. Dubiel, et al., 1987). The report indicates that the WSA has low mineral resource potential for oil and gas, nonmetals, and geothermal energy. A small part of the southeastern portion of the WSA contains an identified subeconomic resource of uranium, and the southern part of the WSA generally has high potential for undiscovered occurrences of uranium except for igneous outcrops on Mt. Holmes and Mt. Ellsworth, which have low potential. The northern part of the study area has moderate potential for uranium. All of the WSA has a low mineral resource potential for copper, lead, silver, and gold.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the foreseeable future, wilderness designation would not significantly affect local economic conditions. Benefits to the local economy from 10 mineral-related jobs would be eliminated by wilderness designation but this would not be significant on a regional basis.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 44 inputs specifically addressing this WSA were received from 351 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 33 commenters supported wilderness designation for part or all of the WSA, while 314 commenters were opposed. Four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values and special features in the WSA. The majority of those commenting in favor of wilderness were from other states and urban Utah.

Those opposing wilderness were concerned that wilderness would prohibit or restrict mineral exploration and development, public access, livestock management, and flood and erosion control; harm local and State economies; and that wilderness designation is unnecessary to protect the area and that it would conflict with other uses. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the USBM and NPS commented on the Draft EIS. The USBM did not take a position regarding wilderness designation but reported a small copper deposit in the WSA. The NPS concurred with the proposed action. The NPS believes that wilderness designation will afford greater protection to the Little Rockies NNL.

No comment letters were received on the Final EIS.

There are two State in-holdings (1,280 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State noted that the geology section should be expanded to include the type and age ranges of surface rocks and to provide additional information on the Salt Wash Member of the Morrison Formation in the WSA. According to the State, additional information is needed to characterize the uranium potential of the study area. The State also recommended that the WSA boundary be moved back from Highway 267 to allow for maintenance of the highway.

The State believes that the Little Rockies WSA has high wilderness values and low to moderate conflicts when compared with other WSAs in the region.
The Little Rockies WSA is in Garfield County. The Garfield County Master Plan covers this WSA. In the plan, Garfield County proposed that 142,653 acres in three BLM and one FS area be recommended to the Utah Congressional delegation as wilderness. The county plan recommends that the remaining lands within the county, including the Little Rockies WSA, be retained for multiple uses.

The County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that restrictions on motorized access would have a detrimental effect on hunting, and that numerous sections of State land would be restricted from providing revenues for the State school system.

LITTLE ROCKIES WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (38,700 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve wilderness values overall in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 3 acres because of uranium exploration and development and would be indirectly reduced in quality on up to an additional 774 acres. Special features would be preserved overall. Some Class A scenery would be reduced in quality in the disturbed areas. The flow of water through Trachyte Creek would be maintained. This alternative would complement the NPS proposal for wilderness designation in the contiguous portion of the Glen Canyon NRA.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on less than 1 percent (3 acres) of the WSA because of uranium exploration and development and would be indirectly reduced in quality on up to an additional 1,935 acres of the WSA. Most special features would not be significantly affected. Class A scenery would be reduced in quality in the disturbed areas and Trachyte Creek could be dewatered. This alternative would not complement the NPS proposal for wilderness management in the contiguous portion of the Glen Canyon NRA. Water could be diverted from the Trachyte Creek upstream of the WSA and used for mining and irrigation.
Impacts on Water Resources	Development and use of water from Trachyte Creek for irrigation and mining could be hampered or restricted because changes in use, changes in points of diversion, or transfer of water rights could be protected by the Federal government to maintain flow through the wilderness.	The 6 miles of Trachyte Creek in the WSA could be dewatered and water quality reduced during periods of flow.
Impacts on Mineral and Energy Exploration and Production	With this alternative, there would not be a significant loss of potential for oil and gas recovery. There is a potential for a loss of commercial deposits of locatable minerals. However, much of the uranium and associated mineral resource is currently under claim and, if valid, could be developed. Therefore, potential to produce an unknown but likely insignificant quantity of locatable mineral resources would be foregone.	Implementation of this alternative would not adversely affect mineral and energy resource exploration and production beyond existing restrictions in the Little Rockies WSA.
Impacts on Economic Conditions	Over the foreseeable future, wilderness designation would not significantly affect local economic conditions. Benefits to the local economy from 10 mineral-related jobs would be eliminated by wilderness designation.	Present economic conditions would not be significantly affected. Over the foreseeable future, mineral activity would increase local employment by 15 jobs which is about 1 percent in Garfield County and about 1.8 percent in Wayne County.

LITTLE ROCKIES WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation a

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 33 S., R. 13 E., Sec. 32	640.00		State	State	No	Exchange	$2,000	
T. 33 S., R. 12 E., Sec. 16	640.00		State	State	No	Exchange	$2,000	

a The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Fremont Gorge WSA



FREMONT GORGE WSA

R. 5 E.

R. 6 E.

T. 29 S.

T. 30 S.

FISHLAKE NATIONAL FOREST

CAPITOL REEF NATIONAL PARK

DIXIE NATIONAL FOREST

Sulphur

Spring

Cook's Mesa

Meeks Mesa

Creek

Canyon

Chimney Rock

Torrey

Landing Strip

Oak Canyon

Sulphur Creek

The Castle

Flats

Lewis

Bear

Fruita

River

JEEP TRAIL

Fremont

Cocks Comb

Fish Creek Cave

Grover

Carcass Creek

Rock Creek

Lion Mtn.

Singletree Ct

2000

2250

3000

2162

2188

2246

2390

2700

2197

A

Fremont Gorge WSA Proposal

UT-050-221

NONE	RECOMMENDED FOR WILDERNESS
	RECOMMENDED FOR NON-WILDERNESS
NONE	LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
NONE	SPLIT ESTATE LAND WITHIN WSA BOUNDARY
NONE	STATE LAND WITHIN WSA BOUNDARY
NONE	PRIVATE LAND WITHIN WSA BOUNDARY

N

SCALE IN MILES

0 1 2

SCALE IN KILOMETERS

0 1 2 3

ELEVATION EXPRESSED IN METERS

October 1991

FREMONT GORGE WILDERNESS STUDY AREA

1. THE STUDY AREA: 2,540 acres

The Fremont Gorge Wilderness Study Area (WSA) (UT-050-221) is in Wayne County, about 3 miles east of Torrey, Utah (population 140). The study area extends about 2 miles from north to south and 3 miles from east to west. The WSA boundaries are along section and subsection lines. The unit is adjacent to Capitol Reef National Park on the north and for about 1 mile on the east (see Map). The WSA contains 2,540 acres of public land administered by the Bureau of Land Management (BLM). No non-Federal lands are within the WSA (see Table 1).

The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province.

The study area is on a broad plateau that slopes gently north-northeast, and is intricately dissected by deep, narrow, meandering canyons that drain eastward into the Fremont River. Narrow, relatively flat-topped ridges separate the canyons. Elevations in the WSA range from 6,000 feet on the east side where Sulphur Creek leaves the WSA to 6,800 feet in the southwestern portion. Vegetation is predominantly scattered pinyon-juniper with associated grasses.

The WSA was dropped from wilderness study status by the Secretary of the Interior on December 30, 1982 due to its small size. As a result of a Federal Court Decision, April 18, 1985, the unit was returned to WSA status.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	2,540
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	2,540
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	2,540
Split-Estate	0
Total BLM land not recommended for wilderness	2,540
In-holdings (State, Private)	0

Source: BLM File Data

FREMONT GORGE WILDERNESS STUDY AREA

The WSA was analyzed in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990, in accordance with provisions of Sections 202 and 603 of the Federal Land Policy and Management Act (FLPMA) and BLM guidance that addresses wilderness consideration for areas smaller than 5,000 acres if such areas are adjacent to land with wilderness potential that is administered by other Federal agencies. The WSA is adjacent to a 4,060-acre area in Capitol Reef National Park that is under consideration by the National Park Service (NPS) for wilderness designation. Two alternatives were analyzed in the EIS: a no wilderness (no action) alternative, which is the recommendation in this report, and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
0 acres
(recommended for wilderness)
2,540 acres
(not recommended for wilderness)

The recommendation for this WSA is to release all of the area for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

The WSA is in a natural condition and has outstanding opportunities for solitude, but it lacks outstanding opportunities for primitive recreation.

The WSA meets wilderness criteria only when considered together with the adjacent portion of Capitol Reef National Park, and the NPS considers it to be only a buffer zone to the Park. The WSA is therefore insignificant in its value and contribution to the Park and, in consideration of its wilderness values, is unsuitable for wilderness designation.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All of the Fremont Gorge WSA is in a natural condition. There is only a 0.75 mile of substantially unnoticeable vehicular way. No surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

The entire WSA meets the criteria for outstanding opportunities for solitude when considered together with the contiguous NPS lands.

Although the WSA is of comparatively small size, several winding canyons, as much as 200 feet deep in the Sulphur Creek and Calf Creek drainages, contribute to the opportunities for solitude. The scattered pinyon-juniper woodland vegetation does not enhance opportunities for solitude. There are no outside sights and sounds that would have an adverse effect on solitude anywhere in the WSA.

C. PRIMITIVE AND UNCONFINED RECREATION

The overall quality of the opportunities for primitive and unconfined recreation is below average and does not meet the criteria for outstanding opportunities for primitive and unconfined recreation. The WSA has opportunities for 10 different activities. Hiking, nature study, photography, and geological sightseeing are only of average quality, however, and all other primitive recreational opportunities the remaining activities are below average quality.

Opportunities for primitive and unconfined recreation are evaluated by considering miles of potential hiking

routes in relationship to the WSA's size, the number of recreational opportunities present, and an evaluation of the quality of these opportunities.

D. Special Features

The WSA has scenic, botanical, and ecological special features. Ecological and botanical features are related to high quality riparian habitat along Sulfur Creek. Peregrine falcons and bald eagles, listed as endangered species, may frequent the WSA. Five special status animal species and two special status plant species may also occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (2,540 acres), which is well represented in the NWPS nationally and in other BLM study areas in Utah and other States.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Fremont Gorge WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the WSA.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,141,465
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,703,658

Source: BLM File Data.

FREMONT GORGE WILDERNESS STUDY AREA

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,220,875
Provo-Orem, Utah	11	721,793	90	2,784,328

Source: BLM File Data.

A Fremont Gorge Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness and to the south-southwest are the 25,751-acre Box-Death Hollow Wilderness and 7,000-acre Ashdown gorge wilderness. All three are administered by the U.S. Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA could be effectively managed to preserve the wilderness values now in the area. Existing uses, such as livestock grazing would continue but would not affect management of wilderness values in the study area.

There are no mineral leases or mining claims, in-holdings, rights-of-way or other valid rights in the WSA that would complicate wilderness management.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for the area. According to BLM geologists, the potential for undiscovered oil and gas resources in the WSA is moderate. The potential for undiscovered metallic mineral resources, including uranium, is low. Deposits of excellent building stone are present in the WSA, but similar sources are also available outside the study area.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 42 inputs specifically addressing this WSA were received from 51 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 40 commenters supported wilderness designation for part or all of the WSA, while 4 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

FREMONT GORGE WILDERNESS STUDY AREA

Those favoring wilderness commented that the WSA has wilderness characteristics, special features, and outstanding opportunities for primitive recreation, and that wilderness designation would not be in conflict with other resource uses, would protect wildlife and wildlife habitat, and would complement management of adjacent Capitol Reef National Park. The majority of those commenting in favor of wilderness were from urban and rural Utah.

Those opposing wilderness were concerned that wilderness would restrict flood and erosion control and cause water right problems, would not be compatible with multiple use, would harm State and local economies, and there is no need for more wilderness. Most of those opposing wilderness designation were from rural Utah.

One Federal Agency, the NPS, commented on the Draft EIS for this WSA. The NPS noted that the Fremont River was deleted from the maps used to show the location of the Fremont River Gorge.

No comment letters were received on the Final EIS.

There are no State in-holdings in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State ranked this WSA last in the region for both wilderness values and conflicts. Due to the small size of the WSA and because it is adjacent to Capitol Reef National Park, the State believes additional study should be given to possible transfer of this WSA from the BLM to the NPS.

The WSA is entirely within Wayne County. The Wayne County Master Planning Report does not identify recommendations at specific locations. The plan recognizes that ". . . outstanding natural landmarks should be preserved as much as possible." However, it also states that "Open spaces should be used for many purposes rather than strictly as wilderness areas." The Wayne County Commission is opposed to wilderness designation for this WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission stated that because this area is an integral part of Capitol Reef, and because the wash area has high scenic value and provides some visual protection to the entrance to Capitol Reef National Park, the area should be included in the park rather than designated as BLM administered wilderness.

FREMONT GORGE WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (2,540 Acres)
Impacts on Wilderness Values	Wilderness values would not be preserved by wilderness designation. However, wilderness values would not be significantly affected in the foreseeable future because no disturbance is anticipated. Vehicular use of a 0.75 mile of way would detract from opportunities for solitude and primitive recreation in the WSA. Increased visitor use would not affect wilderness values because use is generally primitive in nature and associated with access to the Capitol Reef National Park which is large enough to accommodate an increase in visitation. Nondesignation would not complement NPS goals for wilderness management of contiguous NPS lands.	Wilderness designation would preserve wilderness values throughout the entire WSA. Increased visitor use would be primitive in nature and would be easily absorbed in contiguous NPS lands so no impacts to wilderness values would result. This alternative would complement the wilderness management of contiguous NPS lands.
Impacts on Water Resources	This alternative would not alter present or future water quality or uses because additional disturbance is not expected and no additional restrictions would be placed on access construction or use of water upstream of or within the WSA.	Future water quality and upstream uses would not be significantly affected by this alternative. Constraints for protection of wilderness values in the WSA would not add appreciably to existing constraints for the protection of park values in Capitol Reef National Park.

South-East Region

Mancos Mesa WSA

Grand Gulch ISA Complex

Road Canyon WSA

Fish Creek Canyon WSA

Mule Canyon WSA

Cheesebox Canyon WSA

Dark Canyon ISA Complex

Butler Wash WSA

Bridger Jack Mesa WSA

Indian Creek WSA

Behind the Rocks WSA

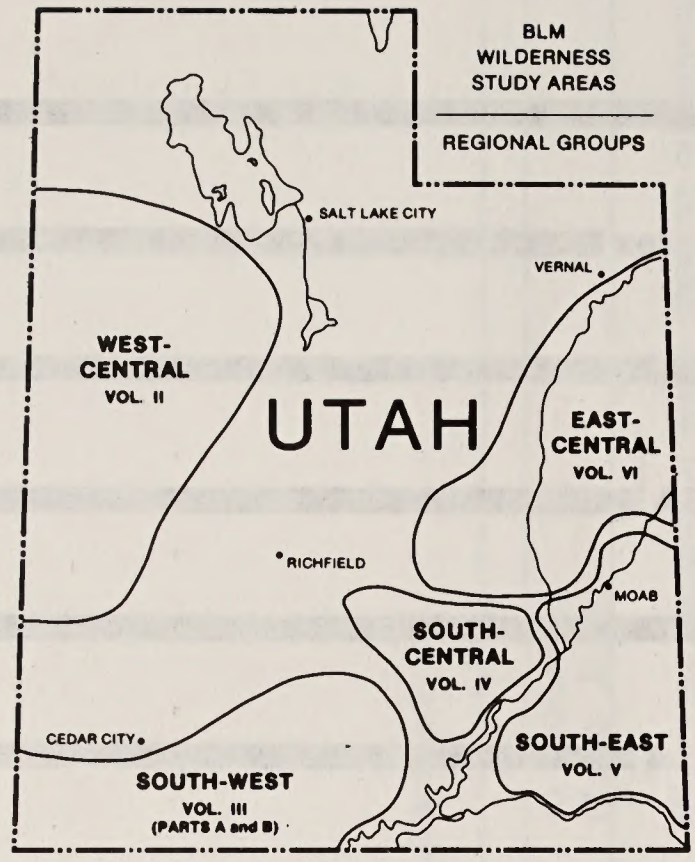
Mill Creek Canyon WSA

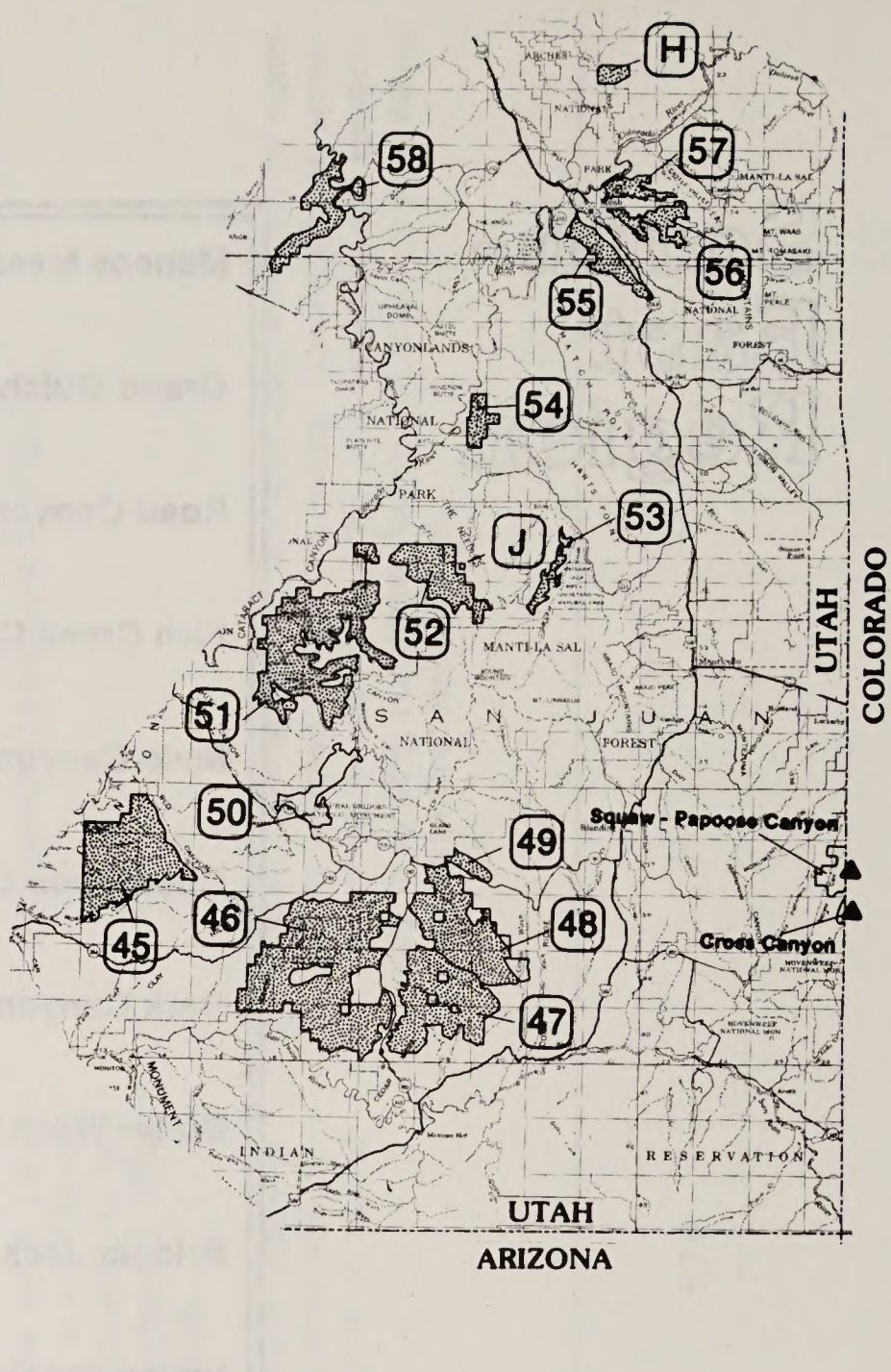
Negro Bill Canyon WSA

Horseshoe Canyon (North) WSA

Lost Spring Canyon WSA

South Needles WSA





MAP REFERENCE NUMBER/STUDY AREA

45 Mancos Mesa WSA
46 Grand Gulch ISA Complex
47 Road Canyon WSA
48 Fish Creek Canyon WSA
49 Mule Canyon WSA
50 Cheesebox Canyon WSA
51 Dark Canyon ISA Complex
52 Butler Wash WSA
53 Bridger Jack Mesa WSA
54 Indian Creek WSA
55 Behind the Rocks WSA
56 Mill Creek Canyon WSA
57 Negro Bill Canyon WSA
58 Horseshoe Canyon WSA
H Lost Spring Canyon WSA
J South Needles WSA

BLM RECOMMENDATION

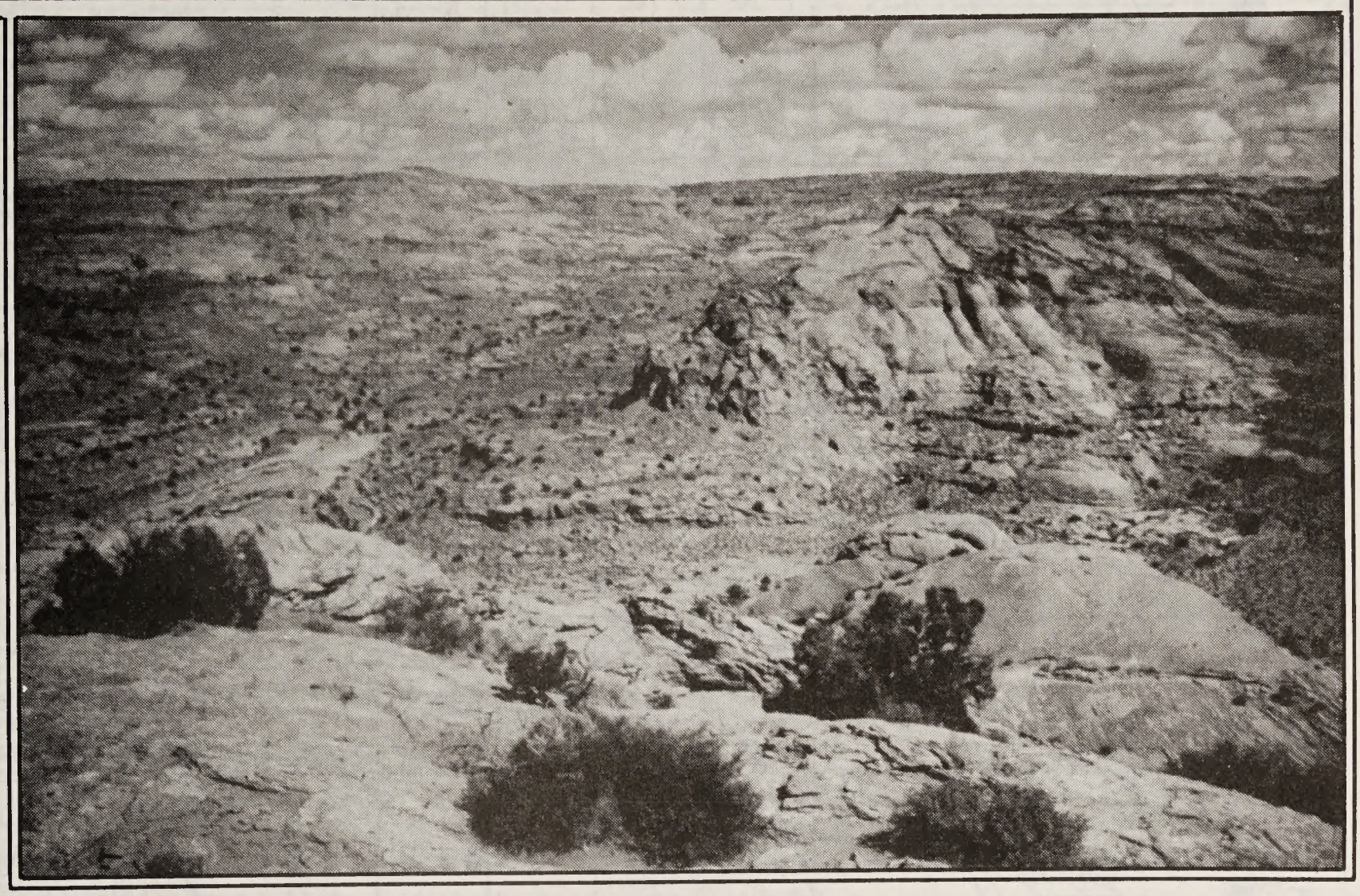
BLM WSAs or portions of WSAs that would be designated wilderness

BLM WSAs or portions of WSAs that would NOT be designated wilderness

BLM WSAs under study by adjacent state

SOUTH-EAST REGION
LOCATION MAP

Mancos Mesa WSA



MANCOS MESA WSA

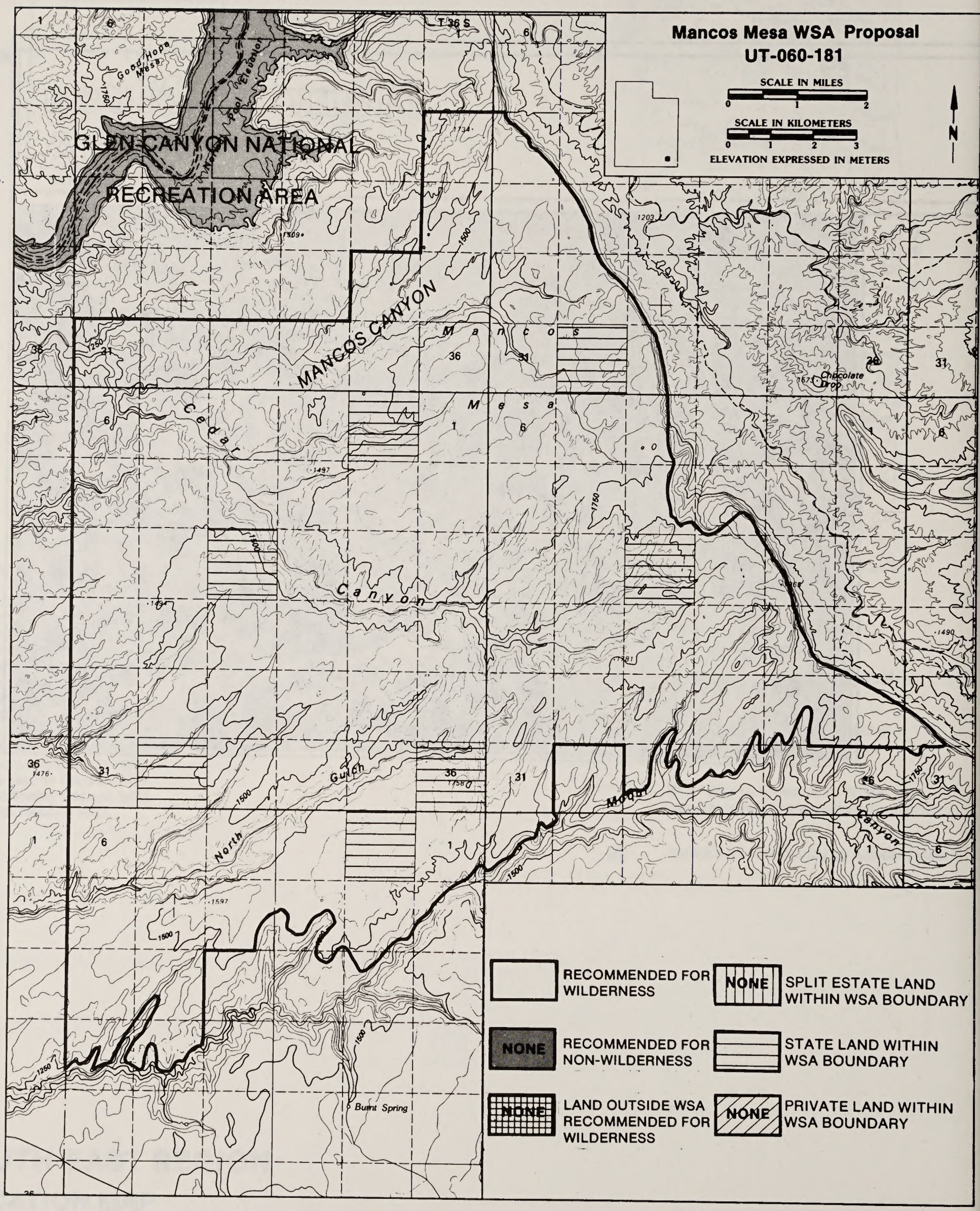
R. 13 E.

R. 14 E.

T. 36 S.

T. 37 S.

T. 38 S.



October 1991

MANCOS MESA WILDERNESS STUDY AREA

1. THE STUDY AREA: 51,440 acres

The Mancos Mesa Wilderness Study Area (WSA) (UT-060-181) is in western San Juan County, about 50 miles west of Blanding, Utah (population 3,118). The unit is irregularly shaped: the western edge is along legal subdivisions and the eastern boundary nearly comes to a point on the southeast; the unit extends a maximum of 13 miles from north to south and 12 miles from east to west. The Glen Canyon National Recreation Area (GCNRA) borders the WSA on the west and north. The eastern and southern boundaries are at the edges of Red Canyon and Moki Canyon, respectively (see Map). The WSA contains 51,440 acres of public land administered by the Bureau of Land Management (BLM).

Seven State sections (4,481 acres) are inheld in the WSA (see Table 1).

The study area is in the Canyonlands Section of the Colorado Plateau Physiographic Province. Mancos Mesa is a rugged, westward-sloping mesa bounded by canyons as much as 600 feet deep. Three winding canyons from 250 to 800 feet deep cut across the mesa. Wind-blown sand covers large parts of the mesa and has accumulated in large deposits in portions of the canyons. There are no perennial streams in the WSA. Elevations in the WSA range from 4,800 feet along the western boundary to more than 6,000 feet in the eastern part. Blackbrush is the most common vegetation. Climate is arid to semiarid, with hot summers and cold winters.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	51,440
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	4,481
Total	55,921
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	51,440
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	51,440
In-holdings (State, private)	4,481
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

MANCOS MESA WILDERNESS STUDY AREA

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report; a no wilderness (no action) alternative; and a partial wilderness alternative of 46,120 acres.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan classified approximately 42,010 acres of the Mancos Mesa WSA as 'primitive' under the Recreation Opportunity Spectrum (ROS) classification system (ROS-P Class). ROS-P Class areas are managed to be essentially free of evidence of human use and to maintain an environment of isolation. Special management requirements now in effect within the ROS-P Class area in the Mancos Mesa WSA, where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; stipulations to prevent surface occupancy on new oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; closure to disposal of mineral materials; exclusion from surface disturbance by mechanized and motorized vehicles; limitation of recreation use to maintain primitive recreation opportunities; exclusion from new land treatments; management to meet Class I objectives for Visual Resource Management (VRM). The remaining 9,430 acres in the Mancos Mesa WSA is classified as a roaded natural area under the ROS criteria; however, this area is closed to OHV use to protect the adjacent primitive class area. In this area, an approved plan of operations is required for any mining-related activity other than casual use.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   51,440 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate all of the study area, 51,440 acres, as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. This recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

About 90 percent of the WSA is natural, and has outstanding opportunities for solitude and primitive recreation. Abandoned dirt roads and mineral exploration pads that affect about 10 percent of the area are slowly becoming less noticeable through natural processes. BLM has approved and funded additional reclamation of the main roads in this area. As of February 1991, reclamation of these roads is under appeal to the Interior Board of Land Appeals. Special features include scenic, geologic, archaeological, historical, and wildlife values.

Approximately 42,010 acres of the area recommended for wilderness designation is in the ROS-P Class where restrictions on OHV use, mineral and energy exploration and development, mineral material disposal, harvest of woodland products, and surface disturbance by mechanized and motorized equipment, would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective. The entire area recommended for wilderness designation would continue to be closed to OHV use.

Uranium, oil and gas deposits probably exist in the WSA, but exploration so far has not located deposits of commercial value. Consequently, BLM believes that wilderness values outweigh the mineral potential.

3. <u>CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION</u>

<u>Wilderness Characteristics</u>

A. <u>Naturalness</u>

Naturalness is defined as an attribute in which the evidence of man is

substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Approximately 46,120 acres (90 percent of the WSA) are free of the imprints of human activity and meet the naturalness criteria under wilderness review. The rugged terrain and relative seclusion of the area characterize its naturalness.

The remaining 5,320 acres (10 percent of the WSA) have significant imprints. Construction of 25 miles of roads associated with mineral exploration in the WSA required significant rock cutting and earthmoving. About 20 drill pads were constructed adjacent to the roads. The disturbed areas affected a total of about 5 acres. Partial revegetation and drifting sand obscure short sections of the roads and some of the drill pads. These imprints occurred shortly after the passage of the FLPMA, but prior to the publication of wilderness inventory guidelines. Currently, the roads are not accessible by 4-wheel vehicles, but motorcycle tracks are evident on some abandoned roads. The roads and drill pads can be seen only from high points in the southeastern portion of the WSA.

Rangeland improvements in the WSA include Potato Hole Spring and stock trail, Jacob's Spring, and a 0.125 mile fence. The fence is adjacent to the eastern boundary, which is along a road.

The relics of an old wooden watering tank are visible at Jacob's Spring. The impacts of the spring improvements are negligible.

B. Solitude

Approximately 90 percent (46,120 acres) of the WSA meets the criteria for outstanding solitude. The remaining 5,320 acres, in the southeastern portion of the WSA, do not meet the standards.

The very size of Mancos Mesa provides a sense of seclusion. The deeply entrenched meandering canyons and their irregular walls provide isolation. Scattered pockets of riparian vegetation provide some screening in the canyon bottoms. On the mesa top, sand dunes, steep sand slides, slickrock faces, bluffs and buttes, and low desert shrubs afford screening necessary for solitude.

The roads in the southeastern portion of the WSA are occasionally used by motorcyclists. These sights and sounds diminish solitude in this portion of the WSA. Lake Powell is visible from high points in the northern and western portions of the WSA, and evidence of uranium mining activity east of Red Canyon can be seen from the rim of Red Canyon. No mining or exploration is currently taking place. These off-site influences have only a minimal effect on solitude because of the distances. Daily commercial airline flights are over the WSA but the disturbance is negligible.

C. Primitive and Unconfined Recreation

Opportunities for backpacking and horseback riding are outstanding in approximately 90 percent of the WSA (46,120 acres). The remaining 5,320 acres, all in the southeastern portion of the WSA, do not meet the criteria for outstanding opportunities for primitive and unconfined recreation.

Opportunities for dispersed, undeveloped recreation are essentially limited only by seasonal lack of water. The sandstone features within the extensive canyons and plateaus provide excellent opportunities for exploration, sightseeing, photography, and scientific and educational studies. The dissected mesa forces visitors to take circuitous routes between points.

D. Special Features

The Mancos Mesa WSA contains archaeological, geological, wildlife, and scenic values.

The peregrine falcon, listed as endangered and eight animal species that are considered sensitive may occur in the WSA. Desert bighorn sheep, which is a wildlife species associated with wilderness is occasionally sighted in the WSA. The WSA may contain one special status plant species. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely blackbrush (51,440 acres). The PNV in the WSA is not represented in the NWPS nationally or in Utah, nor is it represented in other BLM study areas outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mancos Mesa WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 117 areas comprising 6,988,052 acres in Utah and in Arizona, Colorado, and New Mexico, the adjacent states nearest the WSA.

A Mancos Mesa Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	178,624
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	178,624

Source: BLM File Data.

there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness, (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA could be managed as wilderness. There are 3 post-FLPMA oil and gas leases covering 1,565 acres in the WSA. A few exploratory wells which did have shows of oil and gas have been drilled in the vicinity of Mancos Mesa, but these wells were abandoned without production. Because of poor economic

conditions and wilderness protection requirements, oil and gas exploration is not anticipated following wilderness designation. There are 176 mining claims covering 3,520 acres in the WSA. Uranium exploration that would disturb approximately 13 acres is projected following wilderness designation. Uranium development is not projected following designation because the level of known resources and the probability of their development is too low to support a development assumption.

Uranium exploration would be under the unnecessary and undue degradation guidelines with consideration given to wilderness values.

An additional 10 acres of surface disturbance would result from road construction to State in-holdings to provide access for mineral exploration. The potential for additional disturbance on State sections in the WSA is low. Two wells were drilled on State lands within the WSA; however, they were abandoned without production.

It is likely that motorcycle use along abandoned roads will be administratively difficult to control within the WSA.

Domestic livestock grazing would continue as authorized and allotted in the WSA. The use and maintenance of two developed springs and 660 feet of fence would continue in the same manner as in the past based on practical necessity and reasonableness. Such use and maintenance would not significantly reduce wilderness values in the area.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Mancos Mesa WSA (USGS Bulletin 1755-A, Forrest G. Poole, et al., 1989). The report indicates that the WSA does not contain any identified mineral resources. The study area has moderate potential for oil and gas and for uranium resources. However, low mineral resource potential is projected for other metals, coal, and geothermal energy. No coal or thermal springs have been found within the WSA.

Surveys of the WSA and vicinity indicate that rocks which contain oil and gas elsewhere in the region occur beneath the surface of the WSA. A well drilled on a State section in the northern portion of the WSA was found to be dry and was plugged and abandoned in December 1987.

Uranium has been mined southeast of the WSA. The sandstone and rock structures that contain uranium outside the study area extend beneath the surface of the WSA. The workings of one mine that produced significant quantities of uranium ore also extend a short distance under the southeasternmost corner of the WSA.

Large inferred subeconomic sandstone resources in the WSA are suitable for decorative and building stone.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 94 inputs specifically addressing this WSA were received from 901 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statement by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

MANCOS MESA WILDERNESS STUDY AREA

In general, 80 commenters supported wilderness designation for part or all of the WSA, while 816 commenters were opposed. Five commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on their belief that designation would not cause conflicts with minerals interests and that the WSA has significant wilderness values and special features. The majority of those commenting were from outside of Utah.

Those opposing wilderness were concerned that the WSA is just one of many similar areas, wilderness designation is not necessary to protect the area, that the WSA lacks naturalness, and there would be conflicts with State and private lands and with land use plans. Most of the commenters opposed to wilderness were from rural Utah.

One Federal agency, the Environmental Protection Agency (EPA), commented on the Draft EIS for this WSA. The EPA took no position regarding designation of the WSA. The EPA commented that several WSAs near Canyonlands National Park, including Mancos Mesa WSA, should be under similar management or grouped together to form a larger geographical unit to improve integrated multiple resource planning.

No comment letters were received on the Final EIS.

There are seven State sections (4,481 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding designation of the WSA. The State commented that Mancos Mesa WSA has moderate wilderness values but a high significance of conflicts compared to other WSAs in this region. The conflicts are primarily with potential uranium and oil and gas resources. A potential conflict also exists with groundwater development. The State reported that drilling in the area in the late 1970s disclosed some uranium mineralization and also identified errors in BLM's acreage figures for State inholdings.

The Mancos Mesa WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Mancos Mesa WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan and that the BLM had underestimated the mineral potential of the WSA. The Commission also pointed out that State in-holdings would conflict with wilderness management and that the WSA is identical to other areas already protected in the GCNRA, National Parks, National Monuments, and FS wilderness within the Colorado Plateau and in San Juan County.

MANCOS MESA WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (51,440 Acres)	No Action/No Wilderness	Partial Wilderness (46,120 Acres)
Impacts on Wilderness Values	Wilderness designation would protect wilderness values overall in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 23 acres of the WSA and indirectly reduced in quality on up to 1,543 acres. The disturbance would be due to mineral exploration and development of access to State in-holdings. Special features would be preserved. This alternative would complement and enhance wilderness uses and values, and management of the contiguous portion of Glen Canyon National Recreation Area that is proposed for wilderness designation by the National Park Service.	Wilderness values would not be protected by wilderness designation, and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 94 acres of the WSA and indirectly reduced in quality on up to an additional 5,144 acres. The disturbance would be due to mineral exploration and from development of access to State in-holdings. Special features would not be significantly affected. The entire area would remain closed to OHV use. New mining roads would continue to occasionally detract from opportunities for solitude and primitive recreation. This alternative would not complement or enhance wilderness uses, values, and management of contiguous Glen Canyon NRA that is proposed for wilderness designation by the NPS.	Wilderness values would be preserved overall in the designated portion which is approximately 90 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 32 acres of the WSA, and would be indirectly reduced in quality on up to 2,572 acres of the WSA. The disturbance would be due to mineral exploration and from development of access to State in-holdings. Most of the impact would be in the designated area. Special features would be preserved overall. The entire WSA would remain closed to OHV use. This alternative would complement wilderness uses, values, and management of contiguous Glen Canyon NRA that is proposed for wilderness designation by the NPS.

MANCOS MESA WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (51,440 Acres)	No Action/No Wilderness	Partial Wilderness (46,120 Acres)
Impacts on Mineral and Energy Exploration and Production	Opportunities for uranium and oil and gas exploration would be foregone. Loss of development potential would not be significant because of the low likelihood of development following exploration.	Implementation of the No Action/No Wilderness Alternative would not adversely affect mineral exploration or production because access, mineral leasing and mining claim location would not be restricted for preservation of wilderness values. However, surface occupancy restrictions on oil and gas exploration and production and special conditions limiting surface use on locatable mineral exploaration and production activities would continue to be applied on approximately 42,010 acres in the WSA. On approximately 9,430 acres of the WSA, mineral and energy exploration and production would be permitted with special conditions that would limit surface use.	Opportunities for uranium and oil and gas exploration would be foregone because the area presently leased for oil and gas and with the highest potential for these resources would be in the designated area. Loss of development potential would not be significant. Potential for exploration for uranium would be foregone on 90 percent of the WSA.
Impacts on Wildlife and Populations	Population levels would be the same as at present. Wildlife would be protected by reducing the potential for disturbance and activity within the WSA. Endangered, threatened, or sensitive species would be protected. Wildlife would benefit from preservation of solitude.	No long-term adverse impacts on habitat and populations of bighorn sheep, threatened, endangered, or sensitive animal species would occur because only a small portion of the habitat (0.2 percent of the WSA) would be temporarily affected and mitigation would be required.	Populations levels would be the same as at present. Wildlife would be protected by reducing the potential for disturbance and activity on 90 percent of the WSA. Impacts on endangered, threatened, or sensitive species would not be significant.

MANCOS MESA WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (51,440 Acres)	No Action/No Wilderness	Partial Wilderness (46,120 Acres)
Impacts on Cultural Resources	Cultural resources including 17 known sites would benefit from reduction of potential surface disturbance and elimination of vehicular use. Management of sites may be restricted in scope and execution in order to preserve other wilderness values.	Minor impacts to cultural resources would result from surface development. Continued closure to OHV use would provide protection from indirect and direct impacts associated with vehicle access. All archaeological sites would continue to be protected by existing laws. Cultural resource management would continue without regard for other wilderness values.	Cultural resources on 90 percent of the WSA, including 16 of the 17 known sites, would benefit from reduction of potential surface disturbance. Continued closure to OHV use on the nondesignated portion would provide protection from indirect and direct impacts associated with vehicle access. Management of sites may be restricted in order to preserve other wilderness values. Sites in the nondesignated portion would continue to receive protection under existing laws.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

MANCOS MESA WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

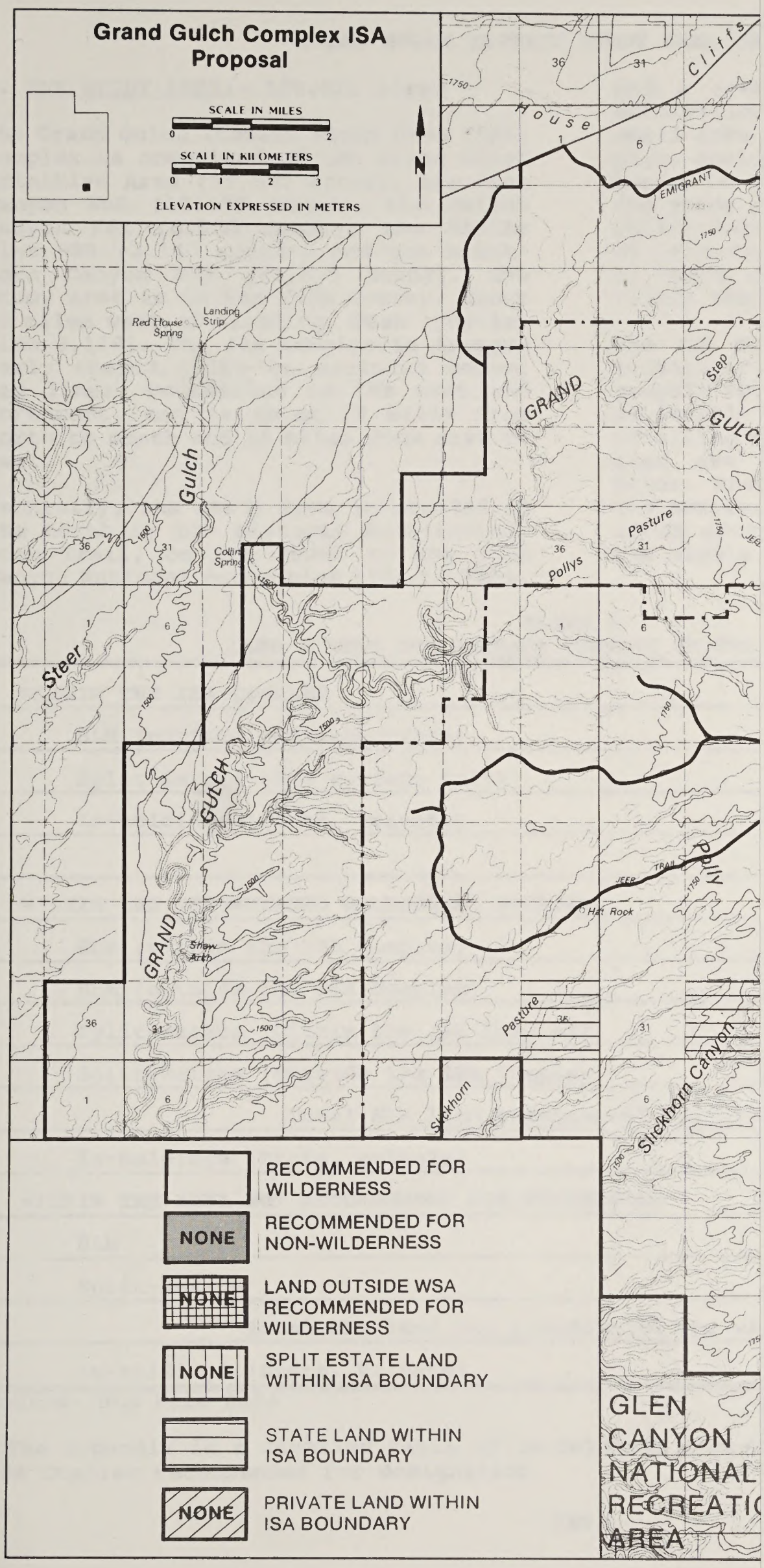
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 35 S., R. 14 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 37 S., R. 13 E., Sec. 2	640.00		State	State	No	Exchange		$2,000
T. 37 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2000
T. 37 S., R. 13 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 37 S., R. 13 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 17 S., R. 14 E., Sec. 16	640.00		State	State	No	Exchange		$2000
T. 38 S., R. 13 E., Sec. 2	641.04		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Grand Gulch Complex



R. 16 E.


Grand Gulch Complex ISA Proposal
SCALE IN MILES
0 1 2
SCALE IN KILOMETERS
0 1 2 3
N
ELEVATION EXPRESSED IN METERS
Cliffs
House
EMIGRANT
Red House Spring
Landing Strip
GRAND
Gulch
Step
GULCH
Pasture
Pollys
Steer
GRAND GULCH
Shaw Arch
Hat Rock
JEEP TRAIL
POLLY
Pasture
Slickhorn
Slickhorn Canyon
GLEN CANYON NATIONAL RECREATIO AREA
RECOMMENDED FOR WILDERNESS
NONE
RECOMMENDED FOR NON-WILDERNESS
NONE
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
NONE
SPLIT ESTATE LAND WITHIN ISA BOUNDARY
STATE LAND WITHIN ISA BOUNDARY
NONE
PRIVATE LAND WITHIN ISA BOUNDARY

GRAND GULCH COMPLEX

R. 16 E. R. 17 E. R. 18 E.

T. 38 S.

T. 39 S.

T. 40 S.

Grand Gulch Complex ISA Proposal

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

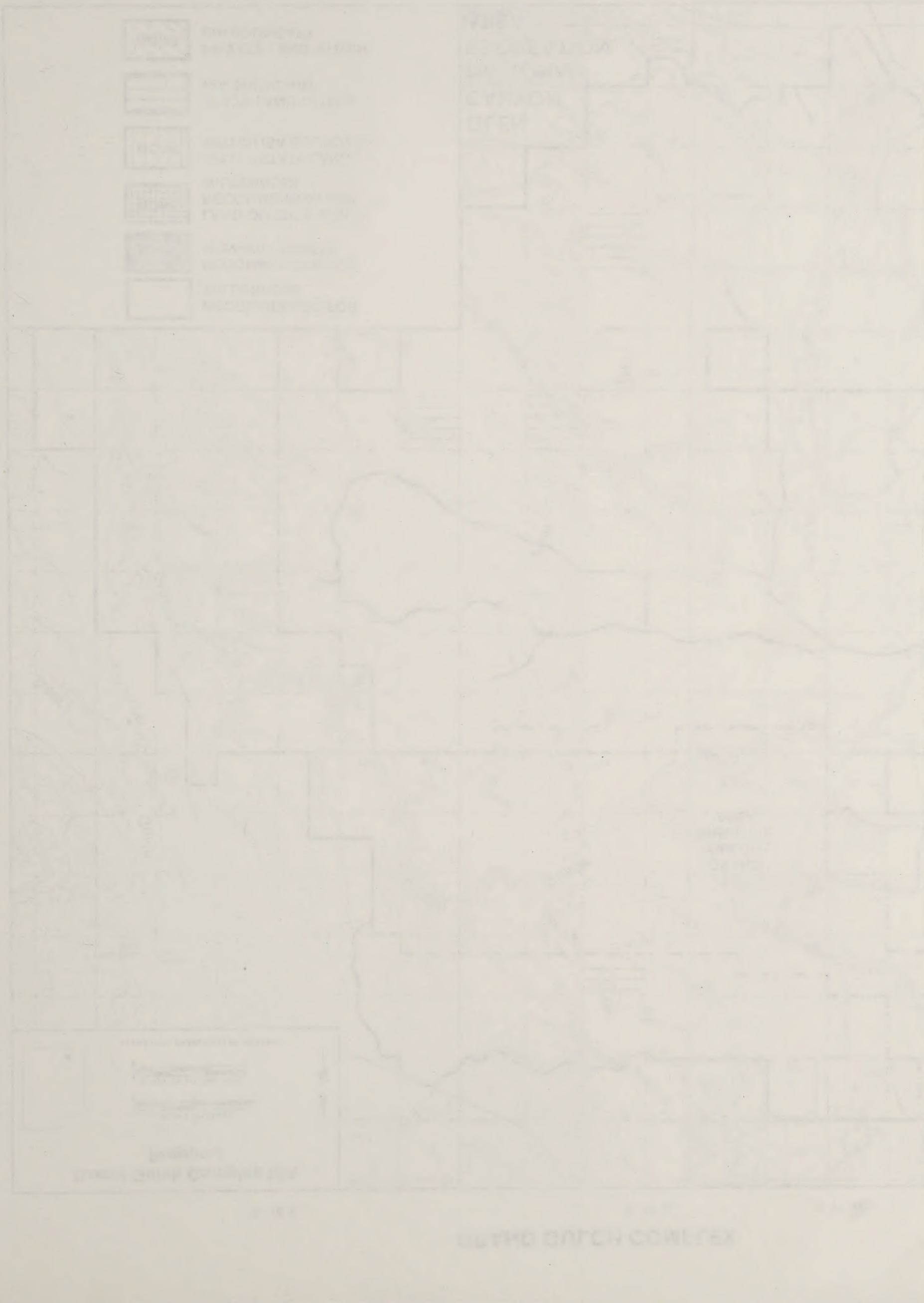
N

GRAND GULCH PRIMITIVE AREA

GLEN CANYON NATIONAL RECREATION AREA

- RECOMMENDED FOR WILDERNESS
- NONE — RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN ISA BOUNDARY
- STATE LAND WITHIN ISA BOUNDARY
- NONE — PRIVATE LAND WITHIN ISA BOUNDARY

October 1991



GRAND GULCH INSTANT STUDY AREA COMPLEX

1. THE STUDY AREA: 105,520 acres

The Grand Gulch Instant Study Area (ISA) Complex is comprised of the Grand Gulch Primitive Area (37,580 acres), the Pine Canyon WSA (10,890 acres), the Bullet Canyon WSA (8,520 acres), the Sheiks Flat WSA (3,140 acres), and the Slickhorn Canyon WSA (43,390 acres). The study area is in San Juan County, about 45 miles west of Blanding, Utah (population 3,118). The ISA Complex is irregularly shaped, with an excluded center and linear boundaries on the west and northeast, and is about 19 miles from north to south and 16 miles from east to west.

Generally, the study area is bounded on the north by the historic Hole-in-the-Rock Trail, on the south by the Glen Canyon National Recreation Area (GCNRA), and a combination of roads and legal subdivisions on the east and the west. A small area in the center of the ISA Complex, enclosed by a loop road on Polly's Mesa, is excluded (see Map).In total, the study area includes 105,520 acres of public land administered by the Bureau of Land Management (BLM). Four sections of State land (2,400 acres) are inheld within the ISA Complex (see Table 1).

The ISA Complex is in the Canyonlands Section of the Colorado Plateau Physiographic Province. The study area is predominantly a network of sinuous canyons, totalling more than 190 miles in length, that are tributary to the San Juan River. Grand Gulch, the main canyon in the complex, meanders about 53 miles and is as much as 400 to 600 feet deep in the middle segment.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE ISA COMPLEX	ACRES
BLM (surface and subsurface)	105,520
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	2,400
Total	107,920
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the ISA Complex)	105,520
BLM (outside the ISA Complex)	0
Split-Estate (within the ISA Complex)	0
Split-Estate (outside the ISA Complex)	0
Total BLM land recommended for wilderness	105,520
In-holdings (State, private)	2,400
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The appendix is a detailed table of in-holdings included within the portion of the ISA Complex recommended for designation.

GRAND GULCH INSTANT STUDY AREA COMPLEX

More than 25 canyons are partly or entirely within the ISA Complex; all are characterized by sheer rock walls, overhangs, pour-offs, knobs, alcoves, archaeological ruins, and rock art. The relatively broad John's Canyon, in the southeastern portion of the ISA Complex, is not part of the Grand Gulch Canyon Complex. The canyons in the ISA Complex penetrate a portion of Cedar Mesa, a very large platform north of the San Juan River. The remnants of the Mesa within the ISA Complex are hilly benches between the canyons. There are no perennial streams in the ISA Complex. Elevations in the ISA Complex range from 4,800 feet in the southwest to 6,400 feet in the northeast. Pinyon-juniper woodland, sagebrush, and blackbrush are the predominant types of vegetation. The climate is generally arid, with cold winters and warm to hot summers.

The ISA Complex was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report; a no wilderness (no action) alternative; and a partial wilderness alternative of 37,580 acres.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes 94,630 acres of the Grand Gulch ISA Complex in the Cedar Mesa Area of Critical Environmental Concern (ACEC) to protect cultural resources, scenic values, and natural values associated with primitive recreation. Within the ACEC, 49,130 acres are designated as the Grand Gulch special emphasis area. This area includes the Grand Gulch Primitive Area and a portion of the Slickhorn Canyon WSA. The special management requirements now in effect within the Grand Gulch special emphasis area portion of the ACEC, where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; management to meet Visual Resource Management Class I objectives; closure to mineral leasing; proposed withdrawal from locatable mineral entry; closure to geophysical work; closure to disposal of mineral materials; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; limitation of recreation use if cultural resources or scenic values are being damaged; exclusion from surface disturbance by mechanized or motorized equipment; exclusion of livestock use on 11,200 acres.

In the remaining 45,500 acres of the ISA Complex within the Cedar Mesa ACEC, the management requirements now in effect, where consistent with valid existing rights, include: open for mineral leasing, geophysical work and disposal of mineral materials with special conditions to protect cultural and scenic resources and primitive recreation opportunities; limitation of OHV use to designated roads and trails; limitation of private and commercial use of woodland products only on designated areas.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   105,520 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this ISA Complex is to designate all of the area, 105,520 acres, as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. This recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the area is in a natural condition and has outstanding opportunities for primitive recreation. About 98 percent of the area has outstanding opportunities for solitude. The ISA Complex is well known for its extensive Anasazi Indian ruins and relics. Other special features are scenic, geologic, and historical resources.

Opportunities for hiking, backpacking, horseback riding, and archaeological and nature study draw thousands of visitors to this area on an annual basis.

Approximately 94,630 acres of the area recommended for wilderness designation are in the Cedar Mesa ACEC where restrictions on OHV use, mineral and energy exploration and production, mineral material disposal, woodland harvest, visual impacts, surface disturbance by mechanized or motorized equipment, and livestock use would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Considerable exploration for oil and gas in and near the ISA Complex has not resulted in commercial discoveries. About 47 percent of the ISA Complex is now closed to oil and gas leasing. There is potential for conflict with future oil and gas exploration activities; the potential for a significant find is considered low to moderate. No other conflicts exist with other land uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Imprints cover less than 1 percent of the ISA Complex, and meet the naturalness standard for areas under wilderness review. The extensive canyon system and high concentration of archeological resources characterize the naturalness of the area. The extensive canyon system and high concentration of archaeological resources characterize the naturalness of the area. The extensive canyon system and high concentration of archaeological resources characterize the naturalness of the area. Overall, the 105,520 acres are natural in character.

Imprints of man within the ISA Complex are mostly the remains of rangeland developments (such as fences, livestock reservoirs, developed springs, and vegetation treatments) and vehicle ways. Major imprints were excluded from the ISA Complex by boundary adjustments during the BLM Intensive Wilderness Inventory. The remaining imprints, including five reclaimed oil and gas test well sites, are not substantially noticeable within the ISA Complex as a whole. The several ways in the ISA Complex total more than 25 miles, but they are rehabilitating naturally and are becoming less noticeable.

Very few imprints of human activities exist in the Grand Gulch Primitive Area. These include some trail improvements in side canyons, a number of closed ways on the benches, a few trail signs, and two portable radio repeater installations. Some cultural sites have been stabilized.

Trail improvements in three locations in the ISA Complex during the 1950s and 1960 included blasting short sections of slickrock. Blasting in Collins Spring Canyon was the most substantial, affecting 75 feet of trail at a pour-over. The blasting at Kane Gulch and Government Trail is not evident to most hikers.

Other imprints are one reservoir near Hardscrabble Way and old seismic lines near ways in the western part of the unit.

The most substantial human imprint within the Pine Canyon WSA is a way in the eastern portion that extends 2.5 miles to an old drill site. The way was bladed through dense pinyon-juniper, but does not now appear to be maintained except by vehicle passage. Here and there vehicles have pulled off the way, probably for woodcutting. The disturbance is not very noticeable because of the screening provided by the dense pinyon-juniper in the area.

The Hole-in-the-Rock Trail, a rough jeep trail, forms the Pine Canyon WSA's northern boundary. Vehicle tracks extend from this trail in only a few places. A little used way that is difficult to follow extends into the unit on Dripping Point. Signs of seismic activity along this trail are disappearing.

In the western end of the Hole-in-the-Rock Trail, there is a steel post-barbed wire fence with a gate. A juniper log

drift fence, dating to the 1920s, is in Dripping Canyon.

In the Bullet Canyon WSA, imprints resulting from grazing activities include four reservoirs, three feed troughs, three developed springs, two drift fences, and two railed areas. The sagebrush railings, completed about 1956, have regrown and are no longer noticeable. The four earthen dam stock reservoirs are all served by the boundary roads. Also, along the boundary within the unit are three metal feed troughs. The most developed spring is in the extreme southeastern part of the unit in a shallow, steep-walled canyon. This development consists of a metal pipe, cement box, and wood and metal trough constructed in 1944. The drift fences may be historic and consist of piled juniper logs; the one in the north has deteriorated and is no longer useful.

Six short seismic lines are along the unit's southern boundary road. The only one that is easily noticeable crosses Bullet Canyon from the trailhead parking area, and is aligned with the road on the north side of the canyon. It cuts through dense pinyon-juniper woodland. The other seismic lines are substantially unnoticeable, having been made through sage and sparse pinyon-juniper, and they have revegetated over the years.

Across the west-central part of the Bullet Canyon area, Hardscrabble Way crosses several washes to a reservoir just inside the Grand Gulch Primitive Area. A portion of this way is now closed to motorized vehicle travel.

Vehicle travel has created ways at two places in the eastern portion of the unit along the edge of Bullet Canyon. Both "ways" wind among the pinyon and juniper trees; the north "way" is now used solely by hikers. The one on the south appears to be the result of entry for firewood cutting.

Imprints in the Sheiks Flat WSA include an area where vegetation was scraped away 26 years ago by railing. The sagebrush has returned, obscuring most evidence of the railing. Two old seismic lines extend into the unit from the southern boundary road but are well screened by pinyon-juniper forest and have little effect on naturalness. Four stock reservoirs in the area are also substantially unnoticeable. A way leaves the unit from the reservoir at the extreme southwest corner. The only other imprint is an old sheepherder's structure north of the Coyote Flat road.

Imprints along the roads in northwest Slickhorn WSA are minimal within the unit and substantially unnoticeable. Near the Government Trailhead, an old seismic line and an old way are in the unit just north of the boundary road. Both are revegetated and are difficult to find. Further west, a juniper pole-barbed wire fence extends about 30 yards into the unit, north of the road. Near the end of the fence, a 40-foot livestock access route has been bulldozed down to a spring.

In the northwestern part of the Slickhorn Canyon WSA, just north of the Polly's Mesa loop road, there is an earthen dam stock reservoir with cattails growing in it. Nearby there are numerous cattle paths and a metal water trough.

Another juniper pole-barbed wire fence in the central part of the ISA Complex extends across a narrow mesa top for about a 0.25 mile.

Near the junction of the Polly's Mesa loop road, a way leads a 0.5 mile to an old corral. Here, a deteriorating wooden fence encloses a small alcove. Below it is one of the previously mentioned reservoirs.

In the north-central part of this ISA Complex are two cherry-stemmed drill pads. In the stream bed just east of the most northern drill pad, a 10-foot stretch that has been bulldozed to allow cattle access to a spring is not noticeable because it is in the wash bottom.

On Point Lookout, a fence angles between the third fork of Slickhorn Canyon and a westerly fork of John's Canyon. The fence was built in 1980 with steel posts and four strands of barbed wire. It extends through moderately dense pinyon-juniper for about 2 miles. Tree cuts are minimal, but there are associated vehicle tracks made during construction.

The pinyon and juniper trees effectively screen views of the fence from any distance other than directly on the fence line.

Also in the Point Lookout area, three reservoirs, a short way that connects two of the reservoirs, and a dilapidated spring improvement consisting of two troughs and a pipeline are at the south end of the cherry-stemmed county road. The way is maintained solely by the passage of vehicles, mostly over slickrock. The Point Lookout reseeding of 640 acres was completed in 1963. Regrowth of sagebrush has occurred obscured plant deadfall and the flat, open area still has much grass. Most visitors probably would not recognize this area as a range plant manipulation project.

In the John's Canyon area, imprints are mainly on the bench tops, although in lower John's Canyon there are an old homestead site, a way, and an old steam drill hole. The homestead, which dates from the 1930s, consists of a corral of juniper poles with cables from the old drilling operation strung between them, the frame of a small tack shed, and two collapsed dugout structures. A juniper pole fenceline in disrepair, probably associated with the homestead, extends across the valley. A large stand of cottonwood trees provides shade and aids in screening these impacts.

The passage of vehicles up the valley of John's Canyon has created a way for 2.3 miles beyond the cherry-stemmed road and drill pad. The way crosses washes at three points, but for the most part it consists of two-wheel ruts over grass and sagebrush. The way ends at an old cowboy camp with a fire pit and old rusted cans. Since this way crosses the wide-bottomed, open valley, it is visible from most vantage points within 1 mile, especially from the canyon rims.

In the west fork of John's Canyon, are a capped drill hole, pipes, and a few other pieces of steel equipment. These have historic value as they are remnants of a steam-powered drilling operation in the early 1900s. Several pinyon trees were cut down in the area, probably for fuel to power the steam drill. The access road was apparently in the wash since there is no longer any sign of it.

The upper forks of John's Canyon are rugged and impassable to vehicles, although there are many access points for vehicles to the canyon rims from roads nearby and Highway 261. Off-road woodcutting seems to be the reason for most of the vehicle tracks along the rims. Along the rim of the western-most fork of John's Canyon, the passage of vehicles created six ways totaling about 4.7 miles into the unit. The ways wind among the pinyon and juniper trees and cut through cryptogamic soil, a fragile arid environment soil composed partly of lichens and microorganisms.

The eastern boundary way serves nine reservoirs, only two of which are on the west side of the way and within the unit. One reservoir is U-shaped with a dam about 8 feet tall. The other has a 3-foot-tall dam and 25-foot-diameter reservoir.

Three short seismic lines on the mesa above John's Canyon are all less than 0.75 of a mile long. The lines were cut through moderately dense pinyon-juniper forest; hence, they are seen easily from the air but are well screened on the ground.

The Muley Point reseeding, in the extreme southeast portion of the ISA Complex, was done at the same time as the Point Lookout reseeding and has similarly revegetated with sage although many grasses still thrive. As with the Point Lookout reseeding, this disturbance would not be obvious to the average visitor.

Two steel pole and barbed wire fences extend very short distances into the unit on the rim of John's Canyon. A livestock trail has been bulldozed to a spring in Section 34. The trail is about 20 yards long and extends down from an overhanging ledge. Since the BLM Wilderness Inventory, three pasture fences were constructed and cultural resource sites have been stabilized. These actions were nonimpairing.

B. Solitude

More than 98 percent (103,920 acres) of the ISA Complex meets the outstanding opportunities for solitude criterion for areas under wilderness review, while

1,600 acres do not. The ISA Complex is large enough to enhance the characteristics that promote solitude.

The ISA Complex includes four major canyons and numerous tributaries that total more than 190 miles. The meanders, high cliffs, and vegetation screening effectively block lines of sight and muffle sounds for any substantial distance. Outside intrusions and influences are almost nonexistent within the canyons. Most of the mesa tops have pinyon-juniper vegetation which, combined with the terrain and topographic relief, effectively screens visitors and allows for solitude. A major commercial flight path crosses over the Grand Gulch Plateau. The occasional high altitude overflights only remind a person of the outside world and do not detract from the opportunities for solitude within the ISA Complex.

In several small areas in the ISA Complex the opportunities for solitude are not outstanding.

About 800 acres in the western portion of the Pine Canyon WSA, have little topographic relief and contain mostly low-lying desert shrub with scattered pinyon-juniper trees. This area is adjacent to Highway 263, and motorized travel on this route limits the opportunities for solitude.

Another area is a 600-acre sagebrush flat adjacent to the southern boundary road in the Sheiks Flat WSA. The lack of screening allows vehicular travel on the road to reduce outstanding opportunities for solitude.

About 200 acres of sage flat and seedings in the southeastern corner of the Slickhorn Canyon WSA is within 1 mile of the Muley Point road. Travel on this road reduces outstanding opportunities for solitude.

Other areas adjacent to boundary roads are screened by pinyon-juniper woodland or are adjacent to boundary roads that are so infrequently traveled as to not disturb solitude. The Loop Road into Polly's Pasture is an example of the latter.

C. Primitive and Unconfined Recreation

In general, the entire ISA Complex meets the criteria for outstanding opportunities for primitive and unconfined recreation.

Grand Gulch and its side canyons are well known for their primitive recreation opportunities. Increasing numbers of hikers and backpackers are using Grand Gulch and Slickhorn and John's Canyons. Access points to the more than 190 miles of canyons are scattered enough to disperse users throughout the canyons.

Grand Gulch and Slickhorn Canyons also provide opportunities for side canyon excursions from float boating trips on the San Juan River. Hikers can also use the benches and mesa tops. Terrain limits horse access to the Collins, Kane Gulch, and government trailheads in the ISA Complex. Horseback travel is also possible over most of the mesa tops.

Sheer sandstone cliffs, pinnacles, knobs, arches, and an abundance of cliff dwellings all contribute to a high quality recreational, educational, and scientific experience. The striking scenery provides outstanding opportunity for high quality sightseeing and photography.

D. Special Features

The canyons of the ISA Complex contain a myriad of sandstone erosion forms in whites, reds, browns, and yellows. Canyons, pinnacles, pedestals, knobs, arches, and alcoves offer unique and dramatic views in nearly every part of the ISA Complex.

Long distance views from the mesa tops include such scenic focal points as Monument Valley, Navajo Mountain, Red House Cliffs, and the Henry Mountains.

Approximately 54 percent of the ISA Complex is rated outstanding for scenic quality.

The area contains extensive remains of the Anasazi Indian occupation from about 200 A.D. to 1300 A.D. There are 580 recorded sites and an estimated 12,360 additional sites. These consist of

lithic scatters, walled fireplaces, pictographs, petroglyphs, pithouses, pottery shards, towers, cliff dwellings, and kivas. Not only are the sites of scientific importance, but they are also of interest to recreationists. The Grand Gulch Archaeological District (4,240 acres) was placed on the National Register of Historic Places in 1982.

Some historic features are also in the ISA Complex. A portion of the northern boundary follows the Hole-in-the-Rock Trail, the route the early Mormon settlers followed in 1879 to settle the town of Bluff, Utah. Evidence that cattlemen used the area in the early 1900s includes the Oliver Ranch in lower John's Canyon.

The ISA Complex has populations of cougar, bobcat, and possibly desert bighorn sheep which are wildlife species associated with wilderness. Peregrine falcons and bald eagles, which are listed as endangered species, may occasionally visit the ISA Complex.

The Utah Division of Wildlife Resources has identified this area as having potential for black-footed ferret. Seven other animal species and four plant species that are considered sensitive may occur in the ISA Complex. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information. Approximately 54 percent of the ISA Complex is rated Class A for scenic quality.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this ISA Complex would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The ISA Complex is in the Colorado Plateau Province/Ecoregion. The PNV in the ISA Complex is blackbrush (30,940 acres) and juniper-pinyon woodland (74,580 acres). Blackbrush PNV is currently not represented at all in the NWPS. Juniper-pinyon woodland PNV is well represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The ISA Complex is not within a 5-hour drive of any major population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	199,124
Juniper-Pinyon Woodland	11	1,401,745	84	2,069,425
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	199,124
Juniper-Pinyon Woodland	1	26,000	53	1,631,618

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Grand Gulch ISA Complex would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the ISA Complex.

A Grand Gulch Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are four designated wilderness areas within 100 miles of the ISA Complex. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The ISA Complex could be managed as wilderness. There are no oil and gas leases. At present, 49,130 acres in the ISA Complex are closed to leasing by the San Juan RMP.

There are no mining claims in the ISA Complex. Because there is little or no potential for locatable minerals, location and/or development of mining claims is not expected. At present, 37,580 acres in the Grand Gulch Primitive Area portion of the ISA Complex are closed to entry under general mining laws.

There are four State sections (2,400 acres) in the ISA Complex. Major developments on these sections and related access and activity would reduce the quality of wilderness values in portions of the ISA Complex; however, the potential for development is low.

Domestic livestock grazing would continue as presently authorized and allotted. Use and maintenance of existing rangeland developments (reservoirs, fences, seedings, 2.5 miles of water pipeline, and three spring developments) would be permitted in accordance with the provisions of 43 CFR 8560. The surface disturbance associated with new rangeland developments would affect only four acres in the study area.

The entire ISA Complex would be closed to ORV use. It is likely that illegal woodcutting will be an ongoing problem following wilderness designation because the vicinity of the study area has traditionally been used by Native Americans for this purpose. The primary impact from this activity will be surface disturbance resulting from ORV use along existing roads and ways and continued use of some existing ways for access. In general, ORV use within the ISA Complex will be administratively difficult to control due to the lack of topographic barriers along mesa tops and benches.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Grand Gulch ISA Complex (USGS Open File Report 81-748 Gordon W. Weir and Thomas D. Light, 1981). The report indicated that the potential for oil and gas reserves in the ISA Complex is low to moderate. The potential for all other mineral and energy resources is low. Approximately 57 oil and gas wells have been drilled near the ISA Complex and five have been drilled inside. Shows of oil and gas were encountered in several strata. All of the wells were plugged and abandoned without production.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Present economic uses and trends would not be significantly affected by wilderness designation. Recreation-related expenditures would contribute $176,169 to $814,703 annually to the local economy. Potential Federal revenues would be about $111,150 less per year than with

the No Action/No Wilderness Alternative because oil and gas leasing and livestock use could not be expanded. Federal revenues from commercial recreation would be about the same as with the No Action/No Wilderness Alternative.

Summary of ISA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the ISA Complex.

During formal public review of the Draft EIS, a total of 222 inputs specifically addressing this ISA Complex were received from 1,258 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 437 commenters supported wilderness designation for part or all of the ISA Complex, while 815 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

The majority of those favoring wilderness designation were from other states. Of particular concern to them was the need to preserve the area and protect wilderness values for future generations and to add the natural diversity in the ISA Complex to the NWPS.

Those opposing wilderness were concerned that wilderness would restrict public access and harm state and local economies. They felt that there is no need for more wilderness and that the ISA Complex could be protected through other forms of management making designation unnecessary. Most of those opposing wilderness designation were from rural Utah.

No comment letters were received on the Final EIS.

One Federal agency, the USBM, commented on the Draft EIS for the Grand Gulch ISA Complex. USBM took no position regarding the designation of the ISA Complex but commented that BLM had underrated the petroleum potential of the ISA Complex.

There are four State sections (2,400 acres) in the ISA Complex. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding designation of the study area. The State commented that the Grand Gulch ISA Complex has the second highest wilderness values in the region with low to moderate conflicts. The State suggested that conflicts with livestock use and potential wildlife habitat improvements could be eliminated by a boundary restricted to the canyon rims. In addition, the State commented that wilderness designation may have a detrimental effect on cultural values in the ISA Complex due to increased activity and vandalism and limits imposed on mechanized law enforcement activities. The State suggested an administrative designation would allow more active management of the critical cultural resources in the area.

The State also indicated that acquisition of the four State sections would be likely.

The degree to which livestock operators would be permitted to use existing ways for vehicle access for the purposes of livestock management was questioned by the State.

The Grand Gulch ISA Complex is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the ISA Complex as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Grand Gulch ISA Complex and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM land in Utah. In commenting on the Draft EIS the Commission noted that designation of the ISA Complex as wilderness would be in conflict with the County Master Plan and that the area is penetrated by too many roads to classify it as roadless. The Commission also pointed out that State in-holdings would

conflict with wilderness management and that the ISA Complex is identical to other areas already protected in the GCNRA, National Parks, National Monuments, and FS wilderness within the Colorado Plateau and in San Juan County.

GRAND GULCH ISA COMPLEX

Table 3
Comparative Summary of Impacts by Alternatives[a]

Issue Topic	Alternatives Recommendation All Wilderness (105,520 Acres)	No Action/No Wilderness	Partial Wilderness (37,580 Acres)
Impacts on Wilderness Values	Wilderness designation would preserve wilderness values overall throughout the ISA. Naturalness and opportunities for solitude and primitive recreation would be directly and indirectly reduced in quality on much less than 1 percent (about 4 acres of direct disturbance and 10 acres of indirect disturbance) of the ISA by development of rangeland projects. Wilderness management criteria would be met and no wilderness values would be lost.	Wilderness values would not be protected by wilderness designation and loss would increase as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 1,684 acres and indirectly reduced in quality on up to an additional 4,220 acres. The disturbance would be due to oil and gas exploration, vegetation treatments, and rangeland projects. Wilderness special features would not be significantly affected because of the relatively small area disturbed and required mitigation.	Implementation of this alternative would result in the same impacts as the No Action/No Wilderness Alternative.
Impacts on Mineral and Energy Exploration and Production	The potential for oil and gas exploration would be foregone. This would not result in a significant loss of oil and gas recovery. Because mineral production is not currently occurring and the area has no known potential for locatable minerals, implementation of this alternative would not result in a significant loss of locatable mineral recovery.	Exploration for oil and gas would be foregone on 47 percent of the ISA. There likely would not be a significant loss of oil and gas or other mineral production because of low probabilities of development.	With this alternative, impacts would be the same as for the No Action/No Wilderness Alternative.

Table 3 (Continued)
Comparative Summary of Impacts by Alternatives

Issue Topic	Alternatives: Recommendation All Wilderness (105,520 Acres)	Alternatives: No Action/No Wilderness	Alternatives: Partial Wilderness (37,580 Acres)
Impacts on Wildlife Habitat and Populations	Wilderness designation would protect wildlife habitat from disturbance and maintain present wildlife populations through the preservation of solitude. Opportunities to provide vegetation, diversity, and additional forage that would benefit big game and certain nongame species through vegetation treatments would be precluded.	Implementation of the land treatment and water development would increase wildlife diversity, populations, forage, and ecotones. Oil and gas exploration would displace some wildlife species on less than 1 percent of the ISA during the lifetime of these projects. Adverse impacts on endangered, threatened, or other special status species would not be significant because of required mitigation and the small area of projected disturbance. Bighorn sheep habitat would not be affected.	Impacts would be the same as with the No Action/No Wilderness Alternative because administration of the area and projected and planned activities would be the same for both alternatives. However, the primitive area would receive statutory rather than administrative protection of wilderness values. The statutory designation would be much less subject to change in the future.
Impacts on Livestock Management	Wilderness designation would result in an inconvenience and slightly increased cost of management for eight livestock operators. The potential for increases in forage production (390 AUMs) through vegetation treatment would be foregone.	Few, if any, changes in livestock use or management techniques are expected with this alternative. Livestock management would not be affected by the No Action/No Wilderness Alternative because present access and management would continue.	Impacts would be the same as with the No Action/No Wilderness Alternative because administration of the area and projected and planned activities would be the same for both alternatives. However, the primitive area would receive statutory rather than administrative protection of wilderness values. The statutory designation would be much less subject to change in the future.

Table 3 (Continued)
Comparative Summary of Impacts by Alternatives

Issue Topic	Alternatives Recommendation All Wilderness (105,520 Acres)	No Action/No Wilderness	Partial Wilderness (37,580 Acres)
Impacts on Cultural Resources	Sites would be protected from most intentional and unintentional damage. Increased recreational use and/or increased inaccessibility may increase certain types of vandalism, but the benefits of protection from disturbance and ORV use would probably outweigh potential losses. Cultural resource management practices may be restricted in order to protect other wilderness values.	Under the management prescriptions for Cedar Mesa ACEC, activities within the portion of the ISA Complex in the ACEC would be approved only with special conditions to protect cultural resources. Measures that limit surface disturbance would reduce direct and indirect impacts to cultural resources. Cultural properties eligible for the National Register of Historic Places would be surrounded by an avoidance area sufficient to allow permanent protection. Cultural resources in the Grand Gulch special emphasis area (Grand Grulch Primitive Area and a portion of Slickhorn Canyon WSA) would receive additional protection by management to exclude surface disturbing activities. All sites in the unit would continue to receive protection under existing laws. In approximately 45,500 acres of the ISA Complex, OHV use would be limited to designated ways and trails which would assist in limiting secondary impacts to cultural resources caused by vehicular access. Vandalism may increase in some portions of the ISA Complex due to the attractive nature of the resources present. Cultural resources would be managed for information potential, public values, and conservation.	Impacts would be the same as with the No Action/No Wilderness Alternative.

Table 3 (Continued)
Comparative Summary of Impacts by Alternatives

Issue Topic	Alternatives		
	Recommendation All Wilderness (105,520 Acres)	No Action/No Wilderness	Partial Wilderness (37,580 Acres)
Impacts on Recreation	Opportunities for primitive recreation would be preserved. Vehicular use would be eliminated. Loss in opportunities for ORV use would not be significant because there is presently little vehicular use in the area (100 visitor days per year) and use is restricted by management and terrain.	Opportunities for primitive recreation would not be significantly reduced by surface disturbing activities because protected disturbance would be small in proportion to the ISA Complex and would not be in the canyon systems that are used for primitive recreation. Primitive recreation use, including commercial outfitting would increase and may have to be controlled in order to ensure a high quality primitive recreational experience. Vehicular use would be limited to designated ways and trails and would primarily affect the mesa tops. Use of designated ways and trails, presently involving less than 100 visitor days per year, would remain relatively light.	Impacts would be the same as with the No Action/No Wilderness Alternative.

Table 3 (Continued)
Comparative Summary of Impacts by Alternatives

Issue Topic	Alternatives: Recommendation All Wilderness (105,520 Acres)	Alternatives: No Action/No Wilderness	Alternatives: Partial Wilderness (37,580 Acres)
Impacts on Local Economic Conditions	Present economic uses and trends would not be significantly affected. Recreation-related expenditures would contribute between $176,169 and $814,703 annually to the local economy. Potential Federal revenues would be about $111,150 less per year than with the No Action/No Wilderness Alternative because oil and gas leasing and livestock use could not be expanded. Federal revenues from commercial recreation would be about the same as with the No Action/No Wilderness Alternative.	Present economic uses and trends would not be significantly affected. Recreation-related expenditures would contribute between $176,169 and $814,703 annually to the local economy. Federal revenues could be increased by as much as $136,154 annually if unleased areas open to leasing were leased for oil and gas, if livestock use expanded to utilize 390 additional AUMs from vegetation treatments, and if commercial recreation use expands at 7 percent annually.	Impacts would be the same as with the No Action/No Wilderness Alternative.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

GRAND GULCH INSTANT STUDY AREA COMPLEX

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

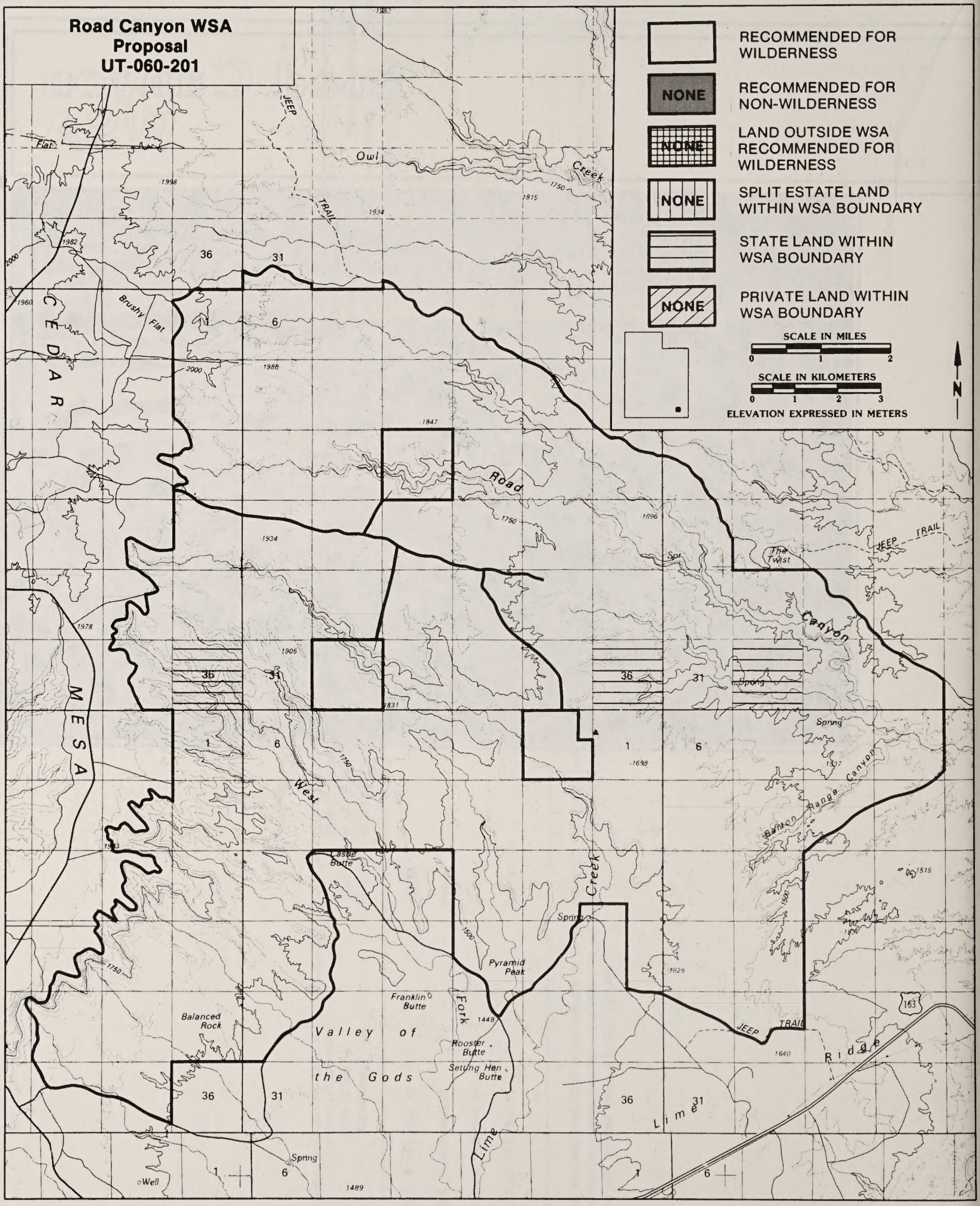
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 38 S., R. 17 E., Sec. 16	480.00		State	State	No	Exchange		$1,500
T. 39 S., R. 16 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 39 S., R. 17 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 40 S., R. 17 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Road Canyon WSA



ROAD CANYON WSA



October 1991

ROAD CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 52,420 acres

The Road Canyon Wilderness Study Area (WSA) (UT-060-201) is in San Juan County, about 10 miles north of Mexican Hat, Utah. The study area is an irregularly shaped unit, 9 miles from north to south and 10 miles from east to west at the widest point. Most of the boundaries of the WSA are along roads and State lands except on the southwest, where the boundary is along the top of a cliff. About 14 miles of the WSA boundary follows unpaved roads and jeep trails. Seven miles of road that penetrate the central part of the WSA from the west are cherry-stemmed, that is, excluded from the study area along with three State sections to which these roads lead (see Map).

The WSA contains 52,420 acres of public land administered by the Bureau of Land Management (BLM). Three sections (1,920 acres) of State land are inheld within the WSA and are within the area recommended as wilderness within the WSA (see Table 1). The Fish Creek Canyon WSA (UT-060-204) is north of this WSA, on the opposite side of a county road.

The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province, and is in the southeastern part of the Grand Gulch Plateau. Three canyons, including Road Canyon, cut through the unit. Steep canyon walls and knobs, pinnacles, arches, and alcoves characterize the WSA. There are no perennial streams in the WSA.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	52,420
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,920
Total	54,820
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	52,420
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	52,420
In-holdings (State, private)	1,920
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

ROAD CANYON WILDERNESS STUDY AREA

Elevations range from 4,700 feet in the southeast to 6,500 feet in the northeast. Desert shrubs and pinyon-juniper are the predominant vegetative types. The climate is predominantly arid, with hot summers and cool to cold winters.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Four alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report; a no wilderness (no action) alternative; a large partial wilderness alternative where 45,720 acres would be designated as wilderness and 6,700 acres would be released for uses other than wilderness; and a small partial wilderness alternative where 23,220 acres would be designated as wilderness and 31,200 acres would be released for uses other than wilderness.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan included all of the Road Canyon WSA in the Cedar Mesa Area of Critical Environmental Concern (ACEC) to protect cultural resources, scenic values, and natural values associated with primitive recreation. Special management requirements now in effect within approximately two-thirds of the WSA in the Cedar Mesa ACEC, which is classified as 'primitive' under the Recreation Opportunity Spectrum (ROS) classification system (ROS-P Class), include: mineral leasing with stipulations to prevent surface occupancy (Category 3); closure to disposal of mineral materials; exclusion from private and commercial use of woodland products, except for on-site collection of dead wood for campfires; closure to off-highway vehicle (OHV) use; management to limit recreation use if cultural resources are being damaged; management to meet Visual Resource Management (VRM) Class I objectives; exclusion from surface disturbance by mechanized or motorized equipment.

Special management requirements now in effect within the remaining one-third of the WSA include: special conditions to protect cultural and scenic resources and primitive recreation opportunities from mineral exploration and production activities; limitation of OHV use to designated roads and trails; private and commercial use of woodland products only in designated areas, except that on-site collection of dead fuelwood for campfires would be allowed throughout the area.

2. RECOMMENDATION AND RATIONALE:
   52,420 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate the entire area, 52,420 acres, as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all inholdings and provides additional information on acquisition.

Overall, the WSA is in a natural condition. About 87 percent has outstanding opportunities for solitude and 44 percent has outstanding opportunities for primitive and unconfined recreation. Although dirt roads to three State sections in the WSA limit opportunities for primitive recreation, the overall wilderness qualities of rolling plateaus and deep, winding canyons are significant. Erosional landforms are of high interest. There is a high density of Anasazi Indian ruins in the WSA.

All of the area recommended for wilderness designation is in the Cedar Mesa ACEC where the restrictions on OHV use, mineral and energy exploration and production, harvest of woodland products, and surface disturbing activities would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Limited exploration for oil and gas has resulted in no discoveries and the potential for any mineral development is considered to be low. Some firewood

cutting occurs in the vicinity of the WSA, but this use can be fully met outside the WSA. Consequently, no conflicts of use or interest exist in the Road Canyon WSA. Wilderness values outweigh the need for possible vegetation treatment on 700 acres that would slightly increase the livestock forage available in the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All of the WSA meets the wilderness standard for naturalness. The naturalness of the area is characterized by various landforms including steep-walled canyons, towering pinnacles, and gently-sloping plateaus.

Several minor imprints of human activities are adjacent to the boundaries of the WSA. Except for a corral and two stock trails, all of the imprints resulted from energy minerals exploration and livestock management prior to the passage of the FLPMA. Imprints affect less than 1 percent of the WSA.

Thirteen livestock reservoirs inside the WSA are all near the boundaries. Most of the reservoirs are more than 20 years old and are substantially revegetated. Few of the dams are more than 6 feet high or more than 30 feet long and reservoir areas are less than 0.25 of an acre. A post-FLPMA log corral was constructed in December 1976 adjacent to the Cigarette Springs road along the boundary of the WSA, affecting a 0.25 of an acre. Fencing at various points along the periphery of the WSA totals about 6 miles. Seven miles of way were constructed on a plateau between Lime Creek and the West Fork of Lime Creek, but the way has revegetated and is substantially unnoticeable. Seismic trails follow the Cigarette Springs boundary road and extend 1 mile into the WSA from Brushy Flat, but are not readily visible because of dense pinyon screening. An abandoned drill hole just north of Snow Flat, adjacent to the northern boundary, is substantially revegetated.

B. Solitude

More than 87 percent (45,720 acres) of the WSA has outstanding opportunities for solitude. The remaining 13 percent (6,700 acres) do not offer outstanding opportunities for solitude.

Rolling plateaus and deep, winding canyons are screened by dense pinyon and juniper woodland and riparian vegetation and provide seclusion throughout most of the WSA. Vistas from cliffs along the plateaus are of a substantially natural area which provides exceptional solitude because of its vastness. Although the southern boundary road can be seen from high points within the WSA, the distance from the road seems great enough to maintain a feeling of isolation.

From viewpoints within the southern part of the WSA, activity on roads in the Valley of the Gods intrude upon solitude. Both the Valley of the Gods and lower Road Canyon are predominantly not screened, so that sights and sounds of human activity affect adjacent parts of the WSA.

C. Primitive and Unconfined Recreation

Forty-four percent of the WSA (23,220 acres) in the northern and eastern portions, including Road and Barton Range Canyons, meet the criteria for outstanding primitive and unconfined recreational opportunities. The southwestern portion of the WSA, 56 percent (29,200 acres), including Lime Creek, does not meet the outstanding recreation criteria because the irregular configuration limits the unconfined nature of the primitive experience.

The extensive canyon and plateau systems offer excellent opportunities for desert hiking and exploration. Rolling plateaus, winding canyons, talus slopes, knobs, buttes, pinnacles, alcoves and other features capture the attention of dayhikers, climbers, and horseback riders. Outstanding opportunities for photography and scientific and educational studies also exist in the WSA.

The Cigarette Springs boundary road, which is excluded from the WSA, dissects the unit on the west side and reduces the area having potential for primitive and unconfined recreation; however, the road provides access into the WSA. Part of the southern boundary road that encircles Castle Butte restricts unconfined recreation, and the open character of the Valley of the Gods adjacent to the road inhibits primitive recreation. The effects of the Valley of the Gods road reduces Lime Creek, the West Fork of Lime Creek, and other drainages to the south into short segments of a few miles each. This irregular configuration reduces the opportunities for an unconfined, primitive recreation experience in this portion of the WSA. The mesa between Road and Lime Creeks also has an irregular configuration due to the cherry-stemmed Cigarette Springs road and State sections, which limits unconfined recreation experiences.

D. Special Features

Scenic and geological special values include the deep canyons, sheer cliffs, and dramatic views from the canyon rims. A portion of Valley of the Gods within the WSA includes monolithic sandstone buttes that rise 400 to 500 feet above the valley floor.

Approximately 56 percent (29,355 acres) of the WSA is rated as outstanding for scenic quality.

Road Canyon WSA contains a variety of topographic features, including unique erosional forms of sandstone, towering pinnacles, steep-walled canyons, and gently sloping plateaus. This WSA incorporates four canyon systems that are typical of the Cedar Mesa area.

A high density of cultural resources (112 recorded and 8,142 potential sites) from both the Basketmaker and Pueblo stages of the Anasazi culture are present in the WSA.

The Hole-in-the-Rock Trail, a National Register site, forms the unit's northeast boundary.

Peregrine falcons and bald eagles, listed as endangered species, may inhabit or use the WSA.

Seven other animal species and three plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (16,420 acres) and juniper-pinyon woodland (36,000 acres). The juniper-pinyon woodland PNV is represented in 10 areas in the NWPS nationally and in one wilderness in Utah, but blackbrush PNV is not represented in the NWPS. This information is summarized in Table 2 from data complied in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Road Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	213,644
Juniper-Pinyon Woodland	11	1,401,745	84	2,108,005
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	213,644
Juniper-Pinyon Woodland	1	26,000	53	1,670,198

Source: BLM File Data.

As of January 1987, the NWPS included 117 areas comprising 6,988,052 acres in Utah and in Arizona, Colorado, and New Mexico, the adjacent states nearest the WSA.

A Road Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres.

There are four designated wilderness areas within 100 miles of the WSA. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA could be managed as wilderness. There are eight existing mining claims covering approximately 160 acres. Development work, extraction, and patenting would be allowed subject to unnecessary and undue degradation guidelines with consideration given to wilderness values; however, there is little or no potential for locatable minerals in the WSA. Based on this information, exploration or development is not projected following designation.

There is one existing post-FLPMA oil and gas lease covering 40 acres in the WSA. Because of depressed oil prices, the low certainty of occurrence of oil and gas in the WSA, and wilderness protection requirements, no exploration or development of these leases is anticipated prior to or following wilderness designation.

There are three State sections (1,920 acres) in the WSA. Major developments on these sections and related access and activity would reduce the quality of wilderness values but the potential for development is low.

Domestic livestock grazing would continue as presently authorized and allotted. The use and maintenance of 6 miles of fence, two stock trails, 13 reservoirs, and one corral would continue in the same manner as in the past based on practical necessity and reasonableness.

About 14 miles of unpaved roads and jeep trails forming a portion of the WSA boundary would remain open to vehicular travel. Approximately 10 miles of cherry-stemmed roads in the WSA would also remain open to vehicular travel. ORV use along these roads will be administratively difficult to control following designation because of the flat terrain along the roads.

ROAD CANYON WILDERNESS STUDY AREA

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Road Canyon WSA (USGS Bulletin 1755-B, Dana J. Bove, et al., 1989). The report indicated that no mineral resources were identified during field examination in the WSA except for common-variety sand and gravel and there is no history of mineral production.

The potential for undiscovered coal, geothermal resources, and metals, including uranium and thorium, is low. Inferred subeconomic resources of sandstone, sand, and gravel have no unique qualities, but could be used locally for road surfaces and construction purposes on a limited basis. Similar materials are abundant outside the study area.

Oil and gas have been produced in the adjacent Paradox Basin from strata that are known to occur beneath the WSA. The WSA is therefore assessed as having moderate oil and gas potential on the basis of regional geology and the occurrence of possible hydrocarbon-bearing rocks underlying the study area.

No indication of geothermal sources were seen or have been reported in or near the WSA. No known coal-bearing formations are present in or beneath the study area.

The geologic environment in the WSA is unfavorable for metallic mineral resources. Mineralized rock was not identified at the surface during field studies or by remote sensing, and there were no significant anomalous values in the geochemical data collected during field investigations.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 112 inputs specifically addressing this WSA were received from 1,145 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 322 commenters supported wilderness designation for part or all of the WSA, while 816 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features in the WSA, opportunities for solitude and primitive recreation, and the naturalness of the area. The majority of those commenting were from outside of Utah. Of particular concern was the need to protect wilderness values in the WSA.

Those opposing wilderness were concerned that wilderness would harm State and local economies, restrict general public access in favor of a few special interest groups, conflict with the use of adjacent non-Federal lands, and prohibit mineral exploration. Many believed that the WSA lacks naturalness and outstanding solitude. Most of those opposed to wilderness designation were from rural Utah.

One Federal agency, the USBM, commented on the Draft EIS for this WSA. The USBM took no position regarding designation of the WSA but commented that BLM underrated the petroleum potential of the WSA.

ROAD CANYON WILDERNESS STUDY AREA

No comment letters were received on the Final EIS.

There are three State sections (1,920 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding designation of the WSA. The State commented that the Road Canyon WSA has high wilderness values and moderate conflicts. The State recommended a more workable alternative would be to restrict the WSA boundary to the canyon rims and allow the mesa tops to be utilized for other practices such as increased and improved forage production for livestock and wildlife. The State added that an administrative designation such as an Area of Critical Environmental Concern (ACEC), may be more appropriate for the WSA than wilderness designation.

The Road Canyon WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Road Canyon WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan and that the area is penetrated by too many roads to classify it as roadless. The Commission also pointed out that State in-holdings would conflict with wilderness management and that the WSA is geologically and ecologically identical to other areas already protected in the Glen Canyon National Recreation Area, National Parks, National Monuments and FS wilderness within the Colorado Plateau and in San Juan County.

ROAD CANYON WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

	Alternatives			
Issue Topic	Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Wilderness Values	Wilderness designation would preserve wilderness values where found throughout the entire WSA.	Wilderness values would not be protected by wilderness management and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost due to disturbance on about 721 acres and would be occasionally and indirectly reduced in quality on up to 2,100 acres. The loss would result from oil and gas exploration, vegetation treatment, and rangeland projects. Special features would not be significantly affected. Vehicular use would detract from opportunities from solitude and primitive recreation on as much as 5,240 acres of the WSA.	Wilderness values would be preserved in the designated area which is approximately 87 percent of the WSA. No disturbance that would result in loss of wilderness values is anticipated in the foreseeable future.	Wilderness values would be preserved in the designated area which is approximately 44 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 711 acres and would be indirectly reduced in quality on up to 7,340 acres of the WSA. All of the impact would be in the non-designated area. No significant loss of special features is anticipated.

ROAD CANYON WSA

Table 3 (continued)
Comparative Summary of Impacts by Alternative

	Alternatives			
Issue Topic	Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Vegetation	Vegetation types would be preserved and endangered, threatened, and other special status species would receive additional protection from disturbance.	Vegetation types would be altered on 1.4 percent (721 acres) of the WSA. Two U.S. Fish and Wildlife Service candidate and one sensitive plant species would not be affected because they do not grow in the pinyon-juniper woodland where the disturbances are projected to occur.	Vegetation types would be preserved and candidate endangered, threatened, and sensitive species would not be affected.	Vegetation types would be altered on 1 percent of the WSA. Two FWS candidate and one sensitive plant species would not be affected.

Table 3 (continued)
Comparative Summary of Impacts by Alternative

	Alternatives			
Issue Topic	Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Mineral Exploration and Development	The potential for oil and gas exploration would be foregone. There would not be a significant loss in production of any mineral or energy resources because there is a low probability of development even without wilderness designation.	Mineral exploration or production would not be adversely affected because mineral leasing, location of mining claims and mineral developments could occur without restrictions for protection of wilderness values. Oil and gas exploration would be limited to no surface occupancy on approximately 66 percent of the WSA. On approximately 33 percent of the area, oil and gas exploration and production would be permitted with special conditions for surface use to protect cultural resources, scenic values, and natural values associated with primitive recreation. Location of mining claims and mineral development would be permitted with an approved plan of operations.	The potential for oil and gas exploration would be foregone. There would not be a significant loss in production of any mineral or energy resources because there is a low probability of development even without wilderness designation.	Implementation would not significantly affect mineral exploration or production. Leasable Mineral exploration and production on 22 percent of the area would be subject to the no surface occupancy stipulation (Category 3). On approximately 33 percent of the area, oil and gas exploration and production would be permitted with special conditions for surface use to protect cultural resources, scenic values, and natural values associated with prmitive recreation. Location of mining claims and mineral development would be permitted with an approved plan of development on 66 percent of the WSA.

Table 3 (continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Wildlife Habitat and Populations	Wilderness designation would protect wildlife habitat from disturbance and maintain present wildlife populations through preservation of naturalness and solitude. Opportunities to provide vegetation diversity and additional forage that would benefit big game and certain nongame species would be precluded. Special status species would receive additional protection.	Vegetation treatment and oil and gas exploration would reduce some wildlife populations on 1.4 percent (721 acres) of the WSA during the lifetime of these projects. Implementation of the land treatment would eventually benefit wildlife diversity and increase population levels. No significant adverse impacts would occur to endangered, threatened, or sensitive species because these species inhabit riparian and cliff face areas that would not be disturbed. Ferruginous hawk habitat would be improved.	Partial wilderness designation would protect wildlife habitat from disturbance and maintain present wildlife populations including special status species through the preservation of naturalness and solitude on 87 percent of the WSA. Opportunities to provide vegetation diversity and additional forage that would benefit big game and certain nongame species would be precluded because the proposed vegetation treatment would be in the designation area and would not be allowed.	Implementation of the land treatment would benefit wildlife diversity and population levels by providing additional forage and ecotones. Oil and gas exploration and vegetation treatment would reduce some wildlife populations on 1.4 percent (711 acres) of the WSA during the lifetime of the projects. Endangered, threatened, and sensitive species would receive additional protection on 44 percent of the WSA.
Impacts on Livestock Management	The potential for vegetation treatment and 170 additional AUMs of livestock forage would be foregone.	Livestock management would not be significantly affected because access, maintenance and development of rangeland improvements and livestock management practices would continue without restrictions for protection of wilderness values.	The potential for vegetation treatment and 170 additional AUMs of livestock forage would be foregone.	Livestock management would not be significantly affected because access, maintenance and rangeland improvements would continue without wilderness restrictions on 66 percent of the WSA. Vegetation would be treated to provide 170 AUMs of forage.

Table 3 (continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Cultural Resources	The benefits of protection of cultural resources including 112 known sites from most surface disturbance and all vehicular access would proba-bly outweigh potential negative effects from increased vandalism due to increased future recreational use. Management of cultural resources may be restricted in scope and execution due to wilderness designation.	Some impact to cultural resources due to surface disturbance is expected under this alternative. Continued vehicular access may cause additional vandalism and intentional or unintentional damage to archaeological sites in portions of the WSA. Cultural resources would be managed for information potential, public values, and conservation. Measures that limit surface disturbance would reduce direct and indirect impacts to cultural resources. Cultural properties eligible for the National Register of Historic Places would be surrounded by an avoidance area sufficient to allow permanent protection.	Cultural resources including 110 recorded sites would receive protection from wilderness designation on 87 percent of the WSA under this alternative. Sites in the nondesignated portion would continue to receive protection under existing laws.	Cultural resources including 102 recorded sites would receive protection from wilderness designation on 44 percent of the WSA under this alternative. Sites in the nondesignated portion would continue to receive protection under existing laws and under the management prescriptions which limit surface disturbance in the Cedar Mesa ACEC.

ROAD CANYON WSA

Table 3 (continued)
Comparative Summary of Impacts by Alternative

	Alternatives			
Issue Topic	Recommendation All Wilderness (52,420 Acres)	No Action/No Wilderness	Large Partial Wilderness (45,720 Acres)	Small Partial Wilderness (23,220 Acres)
Impacts on Recreation	Opportunities for ORV use would be eliminated but opportunities for primitive recreation experience use would be preserved and enhanced. Loss of ORV opportunities would not be significant on a regional basis because there are adequate alternative areas available for ORV use. Primitive-type recreational use would continue to increase. Opportunities for commercial outfitting for primitive recreation would be enhanced.	Approximately 66 percent of the WSA would be closed to OHV use. Opportunities for OHV use would be maintained on designated roads and trails in approximately 33 percent of the WSA. Vehicular use on designated ways and trails and primitive use would continue to increase.	Opportunities for ORV use would be eliminated on 87 percent of the WSA while opportunities for primitive recreation use would be preserved. Loss of ORV opportunities would not be significant on a regional basis because there are adequate alternative areas available for ORV use. Primitive-type recreational use including commercial outfitting would continue to increase.	Opportunities for OHV use would be maintained on designated roads and trails in approximatley 33 percent of the WSA, outside of the designated area. Approximately 22 percent of the WSA outside of the designated area would be closed to OHV use. This would maintain opportunities for primitive recreation in this portion of the WSA. Both primitive recreation and vehicular use would increase.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

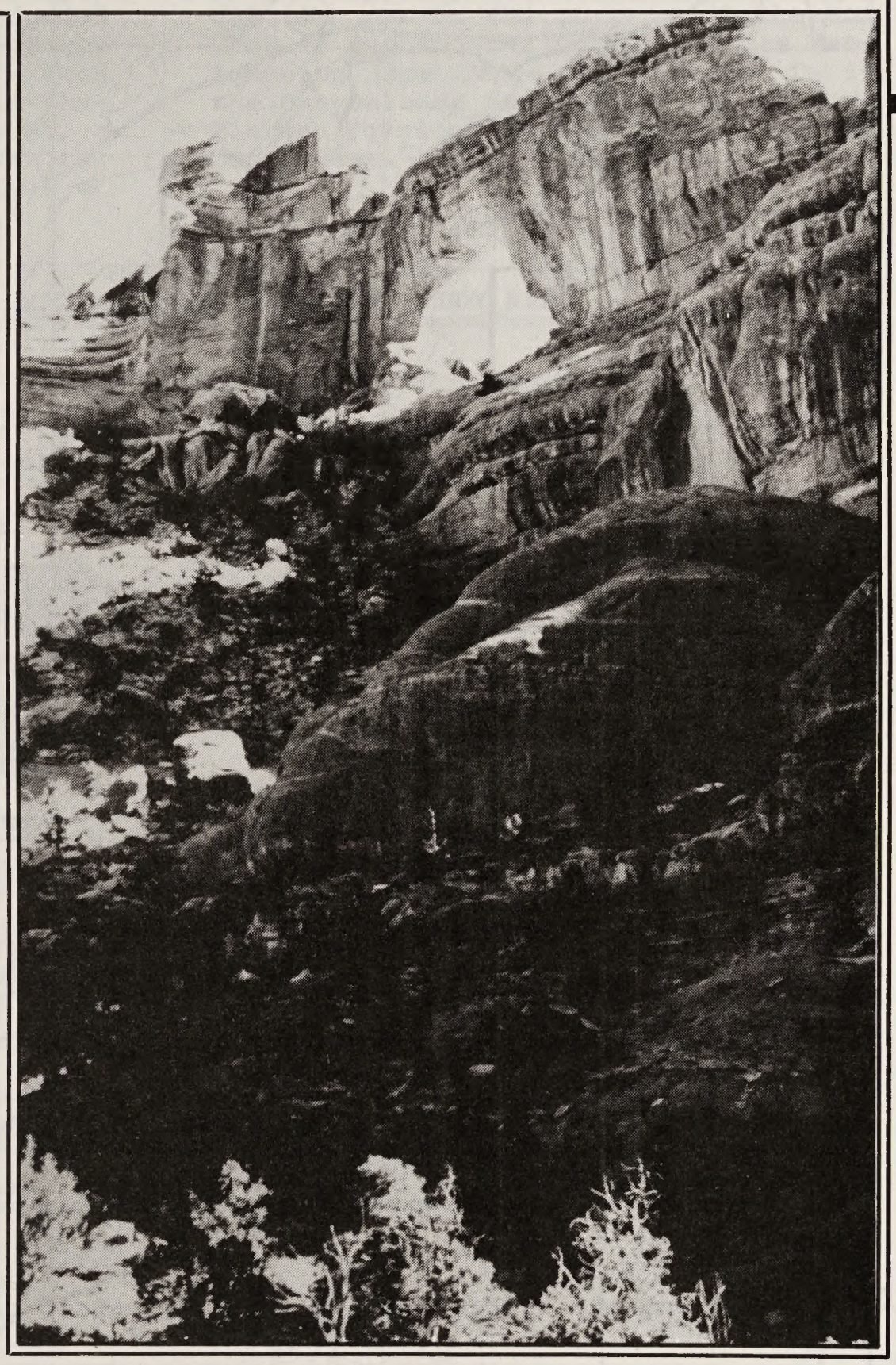
ROAD CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

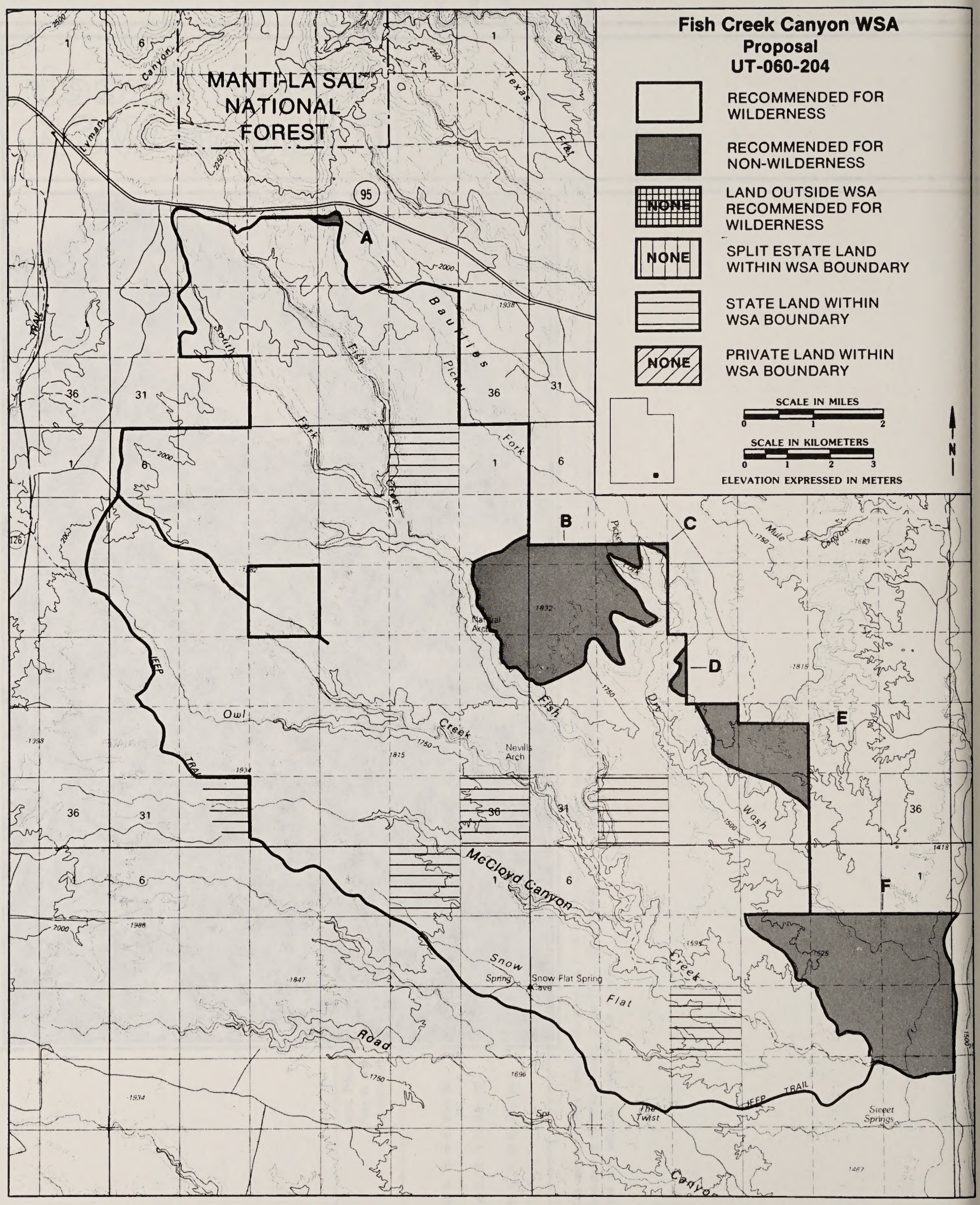
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 39 S., R. 18 E., Sec. 36	640.00		State	State	No	Exchange	$2,000	
T. 39 S., R. 19 E., Sec. 36	640.00		State	State	No	Exchange	$2,000	
T. 39 S., R. 20 E., Sec. 32	640.00		State	State	No	Exchange	$2,000	

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Fish Creek Canyon WSA



FISH CREEK CANYON WSA



October 1991

FISH CREEK CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 46,440 acres

The Fish Creek Canyon Wilderness Study Area (WSA) (UT-060-204) is in San Juan County, about 12 miles southwest of Blanding, Utah (population 3,118). The longest dimension of the study area, 17 miles, extends from the northwest to the southeast; the width varies from 3 to 7 miles, east to west. The WSA is bounded by an old State Highway 95 right-of-way on the north; section lines and a road on the east; the historic Hole-in-the-Rock Trail on the south; and a road, a State section, and a chaining on the west (see Map).

A road and a State section have been cherry-stemmed out of the western portion of the unit. The WSA is separated to the southwest by the Hole-in-the-Rock Trail from the Road Canyon WSA (UT-060-201). The WSA contains 46,440 acres of public land administered by the Bureau of Land Management (BLM). Five State sections (3,210 acres) are inheld in the WSA and are in the portion of the WSA that is recommended for wilderness designation (see Table 1). The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province and is on Cedar Mesa.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	46,440
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,210
Total	49,650
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	40,160
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	40,160
In-holdings (State, private)	3,210
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	6,280
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The four main canyons of the WSA are up to 700 feet deep. They trend generally south-southeast through the mesa, which is covered in most places with dense pinyon-juniper woodland and interspersed sagebrush flats, with some dry washes and bare rock surfaces. The canyons meander somewhat, and contain numerous rock fins, alcoves, pinnacles, step-like pouroffs on the canyon floors, and impressive natural arches. The canyons widen and become shallower at the southern end of the WSA, and cottonwoods grow on the canyon bottoms. Five miles of perennial streams, all of which are in the portion recommended for wilderness designation, flow in the WSA. Elevations in the WSA range from 5,300 feet at the southeastern edge of the WSA to 6,800 feet on the north. In addition to pinyon-juniper woodland and sagebrush, which together occupy two-thirds of the WSA, desert shrubs are common. Ponderosa pine is found in the drainages of the northern part of the WSA. The climate is arid, with cold winters and hot summers.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 40,160 acres would be designated as wilderness and 6,280 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes all of the Fish Creek Canyon WSA within the Cedar Mesa Area of Critical Environmental Concern (ACEC) to protect cultural resources, scenic values, and natural values associated with primitive recreation. Approximately 400 acres in the northwest corner of the WSA is also included in a Scenic Highway Corridor ACEC to protect scenic quality. Special management requirements for approximately 20 percent of the WSA within the Cedar Mesa ACEC, which is classified as "primitive" under the Recreation Opportunity Spectrum classification system (ROS-P Class), where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; stipulation to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; closure to disposal of mineral materials; exclusion from surface disturbance by mechanized and motorized vehicles; management to limit recreation use if cultural resources are being damaged; exclusion from new land treatments; management to meet Visual Resource Management (VRM) Class I objectives.

Management prescriptions for the Scenic Highway Corridor ACEC take precedence over those for the Cedar Mesa ACEC where the ACECs overlap. The special management requirements for approximately 400 acres within the Scenic Highway ACEC, where consistent with valid existing rights, include: stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use required for mining related activity; disposal of mineral materials subject to visual quality considerations; private and commercial use of woodland products in designated areas only, except on-site collection of dead wood for campfires; limitation of OHV use to existing roads and trails; management to limit recreation use if scenic values are being damaged; management to meet VRM Class I objectives.

Special management requirements for the remaining 80 percent of the WSA within the Cedar Mesa ACEC, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to protect cultural and scenic resources and primitive recreation opportunities (Category 2); limitation of OHV use to designated roads and trails; private and commercial use of woodland products only in designated areas, except that on-site collection of

dead wood for campfires would be allowed throughout the area.

2. RECOMMENDATION AND RATIONALE:
40,160 acres
(recommended for wilderness)
6,280 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate a portion of the area, 40,160 acres, as wilderness and to release the remaining 6,280 acres for uses other than wilderness. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the portion of the WSA that is recommended for wilderness designation is in a natural condition and has outstanding opportunities for primitive recreation. Wilderness values, including outstanding opportunities for solitude and primitive and unconfined recreation in combination with special features are within a manageable boundary in the area recommended for designation.

All of the area recommended for wilderness designation and all of the nonrecommended area are in the Cedar Mesa ACEC where the restrictions on OHV use, mineral and energy exploration and development, mineral material disposal, harvest of woodland products, and surface disturbance by mechanized and motorized equipment, would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective. Approximately 380 acres of the recommended area and approximately 20 acres of the nonrecommended area are in the Scenic Highway Corridor ACEC where the restrictions on OHV use, mineral and energy exploration, visual impacts, and woodland harvest would continue to be administratively applied if protection of wilderness characteristics is not a management objective.

The rationale for excluding 6,280 acres in the WSA from the recommendation for wilderness designation is detailed below (see Map).

Area A, between Highway 95 and the rim of the canyon, is the proposed site for construction of a visitor center. The visitor center would help protect the entire Cedar Mesa area including the Fish Creek Canyon WSA by providing a central facility to inform and educate the public about the special resource values of this area. In Area B, a number of vehicle routes extend across sagebrush flats to the rim of the canyon. The recommended boundary follows a vehicle way and brush fence running southwest to the east rim of Fish Creek Canyon then follows the canyon rim southeast for about 2 miles to a way heading northeast for about 1 mile. From this point, the boundary follows the rim of Dry Wash Canyon. Areas C, D, and E were excluded to form a logical topographic boundary along the rim of Dry Wash Canyon. Area F was excluded from the area recommended for designation because the County Class B road in Comb Wash, vehicle ways, a boundary road, abandoned drill holes, and openness of the area all of which detract from the feeling of remoteness and solitude in this portion of the WSA. No conflicts exist with mineral-related or other land uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Sheer sandstone cliffs, pinnacles, knobs, two natural arches, and an abundance of cliff dwellings contribute to the naturalness of the WSA. Imprints of human activity affect less than 1 percent of the WSA. The 46,440 acres meet the naturalness

standards for areas under wilderness review.

The major imprints surrounding Fish Creek WSA were eliminated by boundary adjustments during the BLM Intensive Wilderness Inventory. What remains are 19.8 miles of way, a few livestock developments, four abandoned drill holes, and approximately 2.2 miles of access to a drill hole that has been reclaimed under BLM's Interim Management Policy (IMP) constraints.

From the northeastern side of the WSA a way resulting from vehicle passage extends 5.9 miles south along a narrow mesa top and ends near the mesa point between Fish Creek and Dry Wash Canyons. Three spur ways fork westward from the way. One follows the WSA boundary for about 1.5 miles. It is revegetated with grasses and encroaching bushes. Another way extends west for 0.8 mile and disappears on a sage flat. Vehicle passage created a third way west for 1.0 mile to the rim of Fish Creek Canyon. All three ways cross sage flats and slickrock and weave among the pinyon-juniper.

An access way and drill pad were built in December 1981 from the Comb Wash road. Part of an existing way was accessed by a newly constructed route 2.2 miles long. The newly constructed route and drill pad were reclaimed in 1982.

From the Comb Wash road, another way extends into the unit for 3.1 miles to an abandoned drill hole. This way was originally constructed, but now it is severely washed out where it crosses Fish Creek, and erosion of the road bed is occurring in a few places. Beyond the drill pad, vehicle tracks occur around a small knoll for approximately a 0.5 mile.

An old way extends up Fish Creek Wash for approximately 4 miles. It has become overgrown, washed out, and difficult to find where it crosses the creek bed.

In January 1984, a nonimpairing seismic exploration was conducted in the WSA. The operation consisted of helicopter location of portable drilling rigs to about 20 sites. Holes 10 feet deep were drilled and all cuttings were returned to the drill holes. Less than 1 acre was disturbed and all 20 sites were completely rehabilitated in July 1984.

From the cherry-stemmed road to Snow Flat Spring Cave, a way continues for 1.4 miles to the rim of McCloyd Canyon (a tributary of Owl Creek Canyon). Vehicles have created this way across sage flats and among pinyon-juniper trees. Also from the Snow Flat Road, a way crosses sage flats in State Section 2, ending at the rim of McCloyd Canyon for a total of 1.1 miles. This way also was created by the passage of vehicles and winds among pinyon and juniper trees and sage flats.

Vehicle tracks on the cryptogamic soils approximately 0.3 mile among moderately dense pinyon-juniper woodland enter the unit from State Section 32 on the unit's southwest. These tracks follow the north rim of a shallow canyon.

A railing and reseeding project (the East Slickhorn Reseeding) was completed in 1955 on the unit's northeast boundary. On 1,462 acres, the sagebrush was railed and the area seeded with crested wheatgrass. About 35 acres of these projects are within the WSA. There are large grassy fields along the Dry Wash Road (outside the unit) but in the portion inside the unit, thick 3-foot tall sage is predominant; therefore, the project is thus not apparent within the WSA.

An old and deteriorated corral, possibly with historical value, is in a sage flat in T. 38 S., R. 19 E., Sec. 12. It is built with upright pinyon or juniper poles. The overall influence on the WSA's naturalness is negligible.

An archaeological site that has been fenced and stabilized is on the rim of Dry Wash Canyon on or just inside the WSA boundary. Referred to as Comb Wash Overlook, these are well preserved ruins with a dramatic view of the junction of Dry and Comb Washes.

Three stock reservoirs in the southeastern part of the WSA are not a substantial intrusion. Four abandoned and reclaimed drill holes are also in the southeastern portion of the WSA.

At Snow Flat Spring Cave there are two natural springs. One, inside a cave, has had two wooden troughs placed under the dripping water. A metal sign bearing the words Snow Flat Spring Cave has been placed here, just west of the springs.

A 25-foot wide seismic line runs straight north from the cherry-stemmed road to the drill hole in the western portion of the WSA. It is an imprint within the WSA for a 0.5 mile and is substantially noticeable. A minor boundary adjustment could be made to remove this imprint from the WSA.

B. Solitude

More than 96 percent (44,940 acres) of the WSA and all of the area recommended for designation has outstanding opportunities for solitude. In the southeast portion of the WSA 1,500 acres do not meet the Wilderness Act criteria.

The canyons provide miles of opportunities for users to experience solitude. The meanders of the canyons and 700-foot cliffs effectively block lines of sight and muffle sounds for substantial distances.

Thick pinyon-juniper woodland effectively screens visitors. From high points, a sea of pinyon-juniper cut by abrupt canyons can be seen.

The cultivated fields on Brushy Flat, to the south, can be seen and, to the north, road cuts of the new State Highway 95 are barely visible. For approximately 1 mile south of State Highway 95, sights and sounds of traffic affect the sense of solitude, but users in gulches or canyons can avoid these disturbances.

In the extreme southeast portion of the WSA, the area west of the Class B county road down Comb Wash is relatively open, covered mainly by greasewood. In this open area of 1,500 acres the county road, a barbed wire fence, a corral, and the WSA's southern boundary road reduce the feeling of remoteness and seclusion, creating less than outstanding opportunities for solitude.

Off-site intrusions and influences are essentially nonexistent within the canyons. A major commercial airline flight path crosses over the Grand Gulch Plateau. However, with such a lack of human influences, the occasional high altitude airliner reminds a person of the outside world.

C. Primitive and Unconfined Recreation

All 46,440 acres in the WSA meet the outstanding recreation opportunities criterion for areas under wilderness review.

Fish and Owl Creek Canyons are well known for their primitive recreation opportunities.

The BLM rangers at Grand Gulch sometimes direct visitors to these canyons to experience a less-used, unique canyon system. A convenient loop hike is possible from the heads of the canyons to the junction and return. A trail register is currently in use at the end of the cherry-stemmed access road. State Highway 95 on the north and Snow Flat road on the south also provide convenient access.

Fish, Owl, and McCloyd's Canyons have intermittent running water throughout the drainages and 5 miles of perennial stream, which makes them very attractive during the warmer months.

Hiking and camping are the main recreational activities in these canyons. The upper forks of Fish and Owl Creek Canyons challenge the hiker with rugged terrain, while steep canyon walls provide rock scrambling opportunities for those entering or leaving the deep and narrow canyons.

In addition to outstanding hiking and camping opportunities, the striking scenery provides opportunities for sightseeing and photography.

D. Special Features

Approximately 60 percent (28,000 acres) of the WSA is rated as outstanding for scenic quality.

Fish Creek WSA includes land extensively occupied by the Anasazi from about 200 A.D. to 1300 A.D.

The unit contains a wealth of pristine cultural resources. Not only are these of scientific interest, but they are scenic and make interesting discoveries for the recreationist. An archaeological site on the unit's northeast border has been stabilized and surrounded by a chainlink fence. This site, called Comb Wash Overlook, has four tower bases and a wall on the mesa rim and rock shelter dwellings below.

The well-preserved ruins, with a dramatic view of Dry and Comb Wash junctions, enhance a visitor's feeling of the history and the timelessness of the land. The Hole-in-the-Rock Trail, the route followed by the Mormon settlers in 1879 to 1880, forms most of this unit's southern boundary.

The pioneers camped at Snow Flat Spring Cave and built The Twist, a narrow twisting road through the rocks from the mesa down to the Comb Wash area.

In 1908, as part of a survey of Natural Bridges National Monument, W.B. Douglass of the General Land Office surveyed and described the Snow Flat Spring Cave. He considered the spring to be important to the National Monument because it " . . . supplied the only available water at a necessary intermediate stopping point and was, therefore, essential to public travel."

Bald eagles and peregrine falcons, both endangered species, may be sighted in the WSA. Cougar, a species associated with wilderness, inhabit the WSA.

Seven other animal species and four plant species that are considered sensitive may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (14,559 acres) and juniper-pinyon woodland (31,881 acres).

Blackbrush PNV is currently not represented at all in the NWPS. Juniper-pinyon woodland PNV is well represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	215,505
Juniper-Pinyon Woodland	11	1,401,745	84	2,112,124
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	215,505
Juniper-Pinyon Woodland	1	26,000	53	1,674,317

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Fish Creek Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the WSA.

A Fish Creek Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are four designated wilderness areas within 100 miles of the WSA. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness designation can be managed as wilderness to preserve values now present in the area. BLM projects no surface disturbance following designation of the area recommended under the Partial Wilderness Alternative.

One post-FLPMA oil and gas lease covering 40 acres and one pending oil and gas lease covering 160 acres are in the recommended area. The existing lease is subject to stipulations for the protection of wilderness values. Therefore, exploration and development is not anticipated. There are no mining claims in the recommended area. Development of locatable minerals is not anticipated within the area recommended for designation.

Domestic livestock grazing would continue to occur as currently authorized in the area. Existing range projects could be maintained without impairing the wilderness values of the area.

Six miles of way in the southeast portion of the WSA not recommended for designation would remain open to vehicular travel, as well as the roads bordering the WSA. About 3 miles of road, cherry-stemmed on the west side of the WSA, would remain open to vehicles. Unauthorized ORV use will be an administrative problem along existing roads and ways in the area recommended for designation.

There are five State sections (3,210 acres) in the portion of the WSA recommended for designation and six State sections adjacent to the area. Major developments on these sections and related access and activity would reduce the overall quality of wilderness values in the area recommended for designation; however, the potential for development is low.

The area not recommended for designation also could be managed as wilderness, although it would be more difficult to do so. Much of the area not recommended for designation would be administratively difficult to protect from vehicle use due to the number of existing roads and ways. Outside influences, such as sights and sounds from roads, will detract somewhat from wilderness values, including outstanding opportunities for solitude in the portion of the WSA not recommended for wilderness.

These leases are subject to the wilderness protection stipulation and would likely expire and not be renewed if the area were designated wilderness. There are no mining claims in this area and locatable mineral development is not projected.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Fish Creek WSA (USGS Bulletin 1755-B, Dana J.

Bove, et al., 1989). The report indicated that no mineral resources were identified during field examination in the WSA except for common-variety sand and gravel and there is no history of mineral production.

The potential for undiscovered oil and gas is moderate. The potential for undiscovered coal, geothermal resources, and metals, including uranium and thorium, is low. Sandstone and sand and gravel have no unique qualities, but could have limited local use for road surfaces or other construction purposes. Similar materials are abundant outside the WSA and closer to markets, however.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Future local expenditures could increase up to $240,800 from increases in primitive and motorized recreational use. Up to $92,190 in annual oil and gas lease fees and livestock sales and fees would be foregone. This would not be significant on a regional basis.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 161 inputs specifically addressing this WSA were received from 577 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or testimony by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 377 commenters supported wilderness designation for part or all of the WSA, while 193 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that wilderness designation would protect the values in the WSA from development and preserve them for future generations and would add diversity to the NWPS. The majority of those commenting were from other states.

Those opposing wilderness were concerned that wilderness designation would preclude mineral exploration and development, prohibit wood gathering, harm local and State economies, restrict public access, and would not be compatible with multiple use as it would conflict with nonwilderness uses. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM, commented on the Draft EIS. The USBM expressed no opinion on wilderness designation but stated that the petroleum potential for the WSA may be higher than shown in the Draft EIS.

No comment letters were received on the Final EIS.

There are five State sections (3,210 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that Fish Creek Canyon had high wilderness values and moderate conflicts. Conflicts identified included the planned vegetation treatment and seeding for livestock and wildlife management and the potential development of underground water. The State commented that an administrative designation to facilitate special management of cultural values is preferable to wilderness designation.

The Fish Creek Canyon WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission

is opposed to wilderness designation for the Fish Creek Canyon WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan and that the area is penetrated by too many roads to classify it as roadless. The Commission believes that BLM has underestimated the mineral potential of the WSA. The Commission also pointed out that State inholdings would conflict with wilderness management and that the WSA is geologically and ecologically identical to other areas already protected in the Glen Canyon National Recreation Area, National Parks, National Monuments and FS wilderness within the Colorado Plateau and in San Juan County.

Table 3
Comparative Summary of Impacts By Alternative[a]

Issue Topic	Alternatives Recommendation Partial Wilderness (40,160 Acres)	No Action/No Wilderness	All Wilderness (46,440 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved in the designated area which is approximately 87 percent of the WSA. Vehicular use on designated ways and trails in the nondesignated portion would continue to occasionally detract from opportunities for solitude and primitive recreation in the WSA.	Wilderness values would not be protected by wilderness management and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 2,120 acres of the WSA, and indirectly reduced in quality on up to an additional 4,644 acres. The loss would be due to oil and gas exploration and vegetation treatments. Special features would not be significantly affected. Vehicular use on designated ways and trails and new energy exploration roads would continue to detract from opportunities for solitude and primitive recreation in the WSA.	Wilderness designation would preserve the wilderness values in the WSA.
Impacts on Vegetation	Vegetation types and threatened, endangered, or other special status species would be preserved on 87 percent of the WSA and would not be significantly affected in the nondesignated area because no surface disturbance is projected.	Up to 7.5 percent of the pinyon-juniper woodland type within the WSA would be converted to grasses. There would be no significant impact to populations of threatened, endangered, or other special status plant species because they generally do not grow where the disturbance would occur and mitigation would be required.	Vegetation, including threatened, endangered, and other special status species would be preserved with this alternative because there would be no additional surface disturbance and no OHV use in the WSA.

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (40,160 Acres)	No Action/No Wilderness	All Wilderness (46,440 Acres)
	Alternatives		
Impacts on Mineral and Energy Exploration and Production	The potential for oil and gas exploration would be foregone in the designated area. Restrictions on the nondesignated area would not change from those now in effect. There would not be a significant loss in production of any mineral or energy resource because there would be a low probability or development even without partial wilderness designation.	Implementation of this alternative would not further restrict or affect mineral and energy resource exploration and production beyond those already in effect because mineral leasing, location of mining claims, and mineral developments could occur without restrictions for protection of wilderness values. Approximately 80 percent of the WSA would be open to oil and gas exploration and development with special conditions to protect cultural and scenic resources and primitive recreation opportunities (Category 2). Approximately 20 percent of the WSA would be open to oil and gas exploration and development with stipulations to prevent surface occupancy (Category 3). The entire WSA would be open to mineral entry and development with special conditions for surface use.	The potential for oil and gas exploration would be foregone. There would not be a significant loss in production of any mineral or energy resource because there would be a low probability of mineral development even without wilderness designation.

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (40,160 Acres)	No Action/No Wilderness	All Wilderness (46,440 Acres)
Impacts on Wildlife Habitat and Population	Partial wilderness designation would protect wildlife habitat from disturbance and maintain present wildlife populations including special status species through the preservation of naturalness and solitude on 87 percent of the WSA. Opportunities to provide vegetation diversity and additional forage that would benefit big game and certain nongame species would be precluded because the proposed vegetation treatment would be in the designated area and would not be allowed.	Implementation of the land treatment projects would benefit wildlife diversity and population levels by providing additional forage and ecotones. Surface disturbances caused by the proposed treatment and possible oil and gas exploration may displace some wildlife species during the lifetime of these projects. No significant adverse impacts would occur to threatened, endangered, or other special status species because they inhabit riparian and cliff face areas that would not be disturbed. Ferruginous hawk habitat may be improved by the proposed vegetation treatment.	Wilderness designation would protect wildlife habitat from disturbance and maintain present wildlife populations through preservation of naturalness and solitude. Opportunities to provide vegetation diversity and additional forage that would benefit big game and certain nongame species would be precluded. Special status species would receive additional protection.
Impacts on Livestock Management	Impacts would be about the same as with the All Wilderness Alternative because 87 percent of the WSA would be designated wilderness, access to 13.8 miles of ways would be restricted and the 2,100-acre vegetation treatment would not be allowed.	Existing and proposed livestock management and projects would not be significantly affected because access, maintenance and development of rangeland improvements would continue without restrictions for protection of wilderness values.	The opportunity to increase livestock forage by 500 AUMs through vegetation treatment on 2,100 acres would be foregone. Restrictions on vehicle access on 19.8 miles of way would necessitate changes in livestock management and cause inconvenience and slight increases in costs to 15 livestock permittees.

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (40,160 Acres)	No Action/No Wilderness	All Wilderness (46,440 Acres)
Impacts on Cultural Resources	Cultural resources including 51 recorded sites would receive protection from wilderness designation on 87 percent of the WSA under this alternative. Sites in the nondesignated portion would continue to receive protection under existing laws and under the management prescriptions which limit surface disturbance in the Cedar Mesa ACEC.	Measures that limit surface disturbance would reduce direct and indirect impacts to cultural resources. Minor impact to cultural resources is expected due to oil and gas exploration. Cultural properties eligible for the National Register of Historic Places would be surrounded by an avoidance area sufficient to allow permanent protection. Vehicle access may cause intentional or unintentional damage to archaeological sites in portions of the WSA. Cultural resources would be managed for information potential, public values, and conservation. Cultural resource management would continue without regard to wilderness management.	The benefits of protection of cultural resources including 61 known sites from most surface disturbance and all vehicular access would probably outweigh potential negative effects from increased vandalism due to increased future recreational use. Management of cultural resources may be restricted in scope and execution due to wilderness designation.
Impacts on Recreation	Opportunities for OHV use would be eliminated on 87 percent of the WSA while opportunities for primitive recreation use would be preserved. Loss of OHV opportunities would not be significant on a regional basis because there are adequate alternative areas available for OHV use. Primitive-type recreational use including opportunities for commercial outfitting would continue to increase.	Approximately 20 percent of the WSA would be closed to OHV use. Opportunities for OHV use would be maintained on designated ways and trails in approximately 80 percent of the WSA. The quality of opportunities for primitive recreation would be reduced on up to 80 percent of the WSA. Vehicular use on designated ways and trails as well as primitive use would continue to increase.	Opportunities for OHV use would be eliminated but opportunities for primitive recreation experience use would be preserved and enhanced. Loss of OHV opportunities would not be significant on a regional basis because there are adequate alternative areas available for OHV use. Primitive-type recreational use would continue to increase. Opportunities for commercial outfitting for primitive recreation would be enhanced.

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (40,160 Acres)	No Action/No Wilderness	All Wilderness (46,440 Acres)
Impacts on Economic Conditions	Future local expenditures could increase up to $240,800 from increases in primitive and motorized recreational use. Up to $92,190 in annual oil and gas lease fees and livestock sales and fees would be foregone.	Present economic trends would not be affected because major mineral or other developments are not projected to occur in the WSA in the foreseeable future. Recreation-related expenditures could contribute up to $244,800 to the local economy by the year 2020. An additional 500 AUMs from vegetation manipulation would contribute up to $10,000 annually in local livestock sales and $770 annually in grazing fees. Present and future oil and gas leases could contribute up to $90,640 annually in Federal lease revenues.	Future local recreation-related expenditures could increase up to $240,800 with an increase in primitive recreation use. Up to $101,410 in annual oil and gas lease fees and livestock sales and fees would be foregone.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

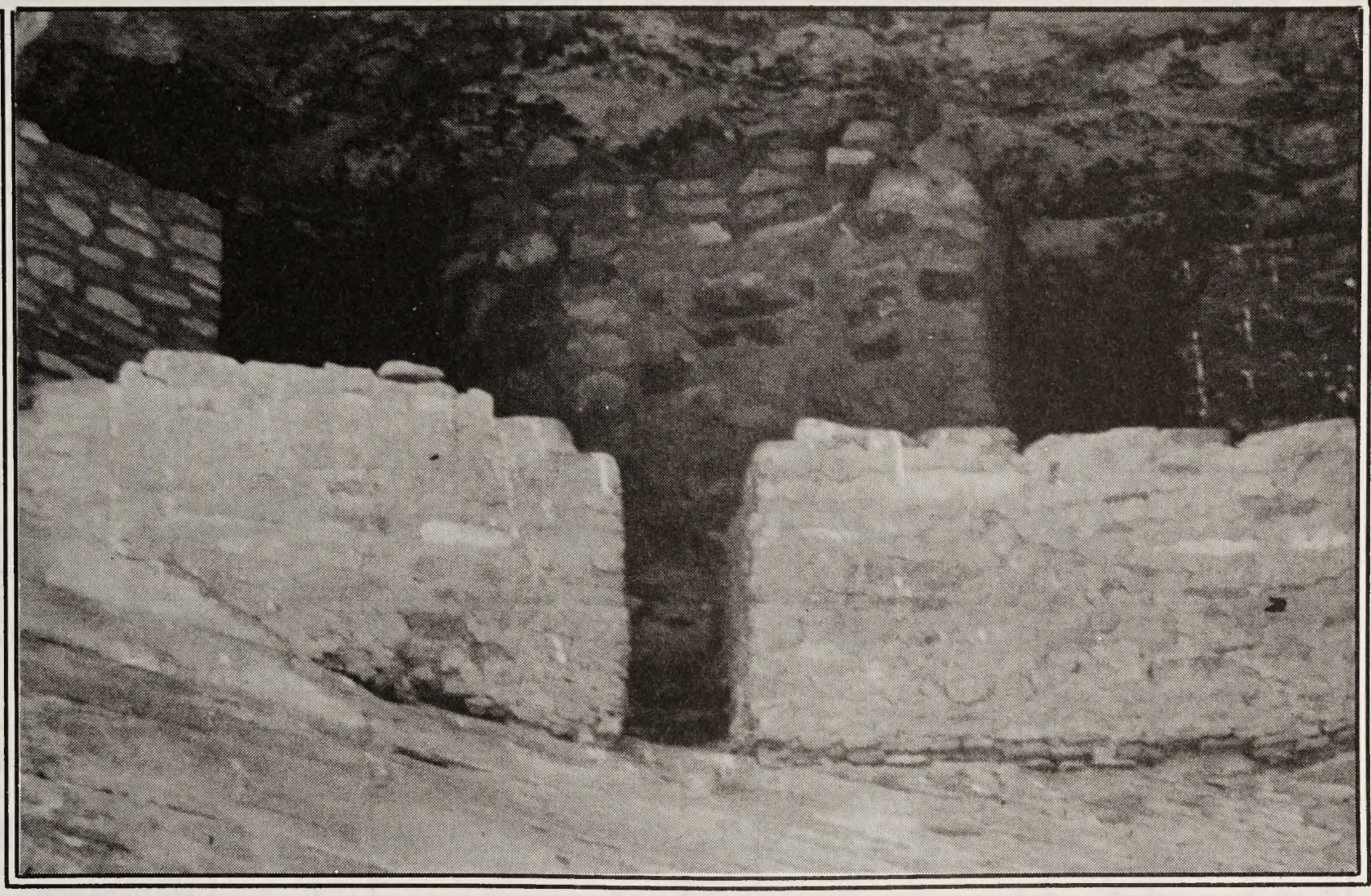
FISH CREEK CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 38 S., R. 19 E., Sec. 2	651.00		State	State	No	Exchange		$2,000
T. 38 S., R. 19 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 38 S., R. 20 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 39 S., R. 19 E., Sec. 2	639.40		State	State	No	Exchange		$2,000
T. 39 S., R. 20 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Mule Canyon WSA



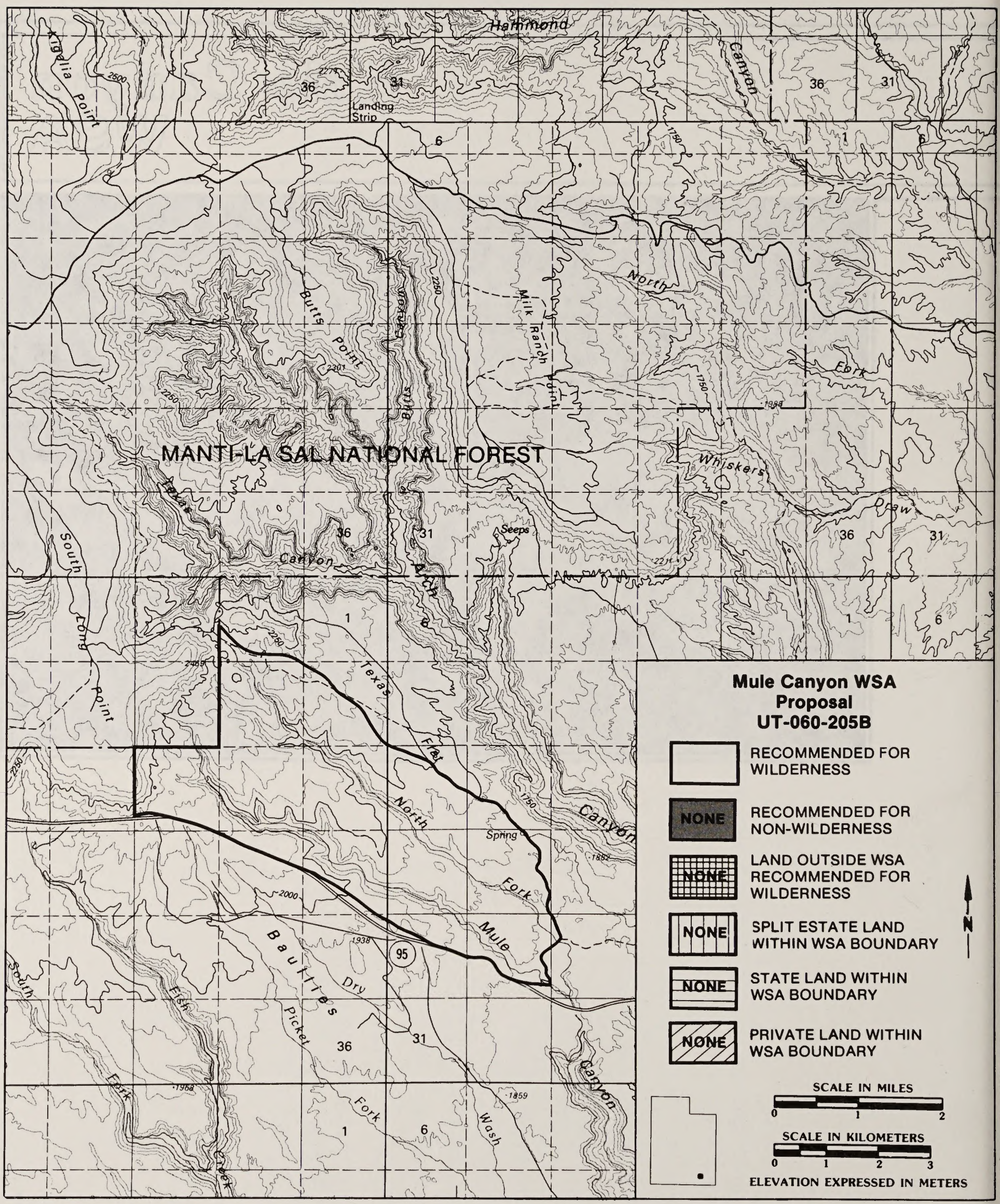
MULE CANYON WSA

R. 19 E.

R. 20 E.

T. 36 S.

T. 37 S.



Mule Canyon WSA Proposal UT-060-205B

- RECOMMENDED FOR WILDERNESS
- NONE — RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- NONE — STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

N

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

October 1991

MULE CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 5,990 acres

The Mule Canyon Wilderness Study Area (WSA) (UT-060-205B) is in south-central San Juan County, about 30 miles west of Blanding, Utah (population 3,118). The study area is oriented northwest-southeast, and extends approximately 5 miles from the northwest to the southeast and 2.25 miles from east to west. A rangeland project and a dirt road form the north and west boundaries. The WSA is bounded by State Highway 95 on the south and by the Manti-La Sal National Forest on the west (see Map). The WSA contains 5,990 acres of public land administered by the Bureau of Land Management (BLM). No State, private, or split-estate lands are within the WSA (see Table 1).

The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province.

The two canyons which characterize the study area, the head of Mule Canyon and the head of the North Fork of Mule Canyon, trend southeast. The walls of the canyons are alternating layers of red and white sandstone. The canyons cut into a terrace which is part of Grand Gulch Plateau, or Cedar Mesa. No perennial streams flow in the WSA. Elevations in the WSA range from 6,000 feet in the southeastern part of the WSA to 7,600 feet in the northwest. About 40 percent of the study area is barren of vegetation, but a fairly dense, mature pinyon-juniper woodland and scattered Ponderosa Pine and Douglas-fir trees cover most of the WSA. The climate is semiarid, with warm summers and cool winters.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	5,990
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	5,990
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	5,990
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	5,990
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes all of the Mule Canyon WSA in the Cedar Mesa Area of Critical Environmental Concern (ACEC) to protect cultural resources, scenic values, and natural values associated with primitive recreation. Approximately 20 percent (1,200 acres) of the Mule Canyon WSA was included in a Scenic Highway Corridor ACEC to protect scenic quality. Management prescriptions for a Scenic Highway Corridor ACEC take precedence over those for the Cedar Mesa ACEC where the ACECs overlap.

For the approximately 20 percent of the WSA in the Scenic Highway Corridor ACEC, the special management requirements now in effect, where consistent with valid existing rights, include: stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirements for an approved plan of operations with special conditions to limit surface use for mining related activity; disposal of mineral materials subject to visual quality considerations; private and commercial use of woodland products in designated areas only, except on-site collection of dead wood for campfires; limitation of off-highway vehicle (OHV) use to existing roads and trails; management to limit recreation use if scenic values are being damaged; management to meet Visual Resource Management (VRM) Class I objectives.

For the approximately 80 percent of the WSA in the Cedar Mesa ACEC, the special management requirements now in effect, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to protect cultural and scenic resources and primitive recreation opportunities (Category 2), limitation of OHV use to designated roads and trails, private and commercial use of woodland products only in designated areas only, except that on-site collection of dead wood for campfires would be allowed.

2. RECOMMENDATION AND RATIONALE:
   5,990 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate the entire area (5,990 acres) as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the WSA is in a natural condition and has outstanding opportunities for primitive recreation. About 87 percent of the WSA has outstanding opportunities for solitude. The remaining 13 percent of the WSA does not have outstanding opportunities for solitude due to the nearness of State Highway 95. Archaeological sites are significant in the WSA; most of the 37 known archaeological sites in the study area are cliff dwellings.

The entire WSA is in the Cedar Mesa ACEC where restrictions on OHV use, mineral and energy exploration and development, and harvest of woodland products would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective. Approximately 20 percent of the WSA is in a Scenic Highway Corridor ACEC where restrictions on OHV use, mineral and energy exploration, visual impacts, and woodland harvest would continue to be administratively applied if protection of wilderness characteristics is not a management objective.

No conflicts exist with mineral-related or other land uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man

exhibit no cumulative impact that is substantially noticeable. Most of the WSA appears to be predominantly natural and free of human imprints. The isolation of the canyons, the outstanding cultural values and the scenic qualities of the WSA contribute to its naturalness. Imprints on Texas Flat (a road, railing, and reservoir) were excluded from the WSA in the BLM Intensive Wilderness Inventory. The remaining imprints are all on the periphery and are so minor that they do not affect the naturalness of the WSA as a whole. Imprints of human occupance and activity cover less than 1 percent of the WSA. No surface-disturbing activities have taken place in the WSA since the BLM Wilderness Inventory in 1980.

Dog Tank Spring was improved in 1971 by the installation of 700 feet of buried pipe, directing water into two metal troughs. A campsite is near this spring which consists of a short spur way from the boundary road, a small clearing, and a fire ring.

In the extreme southeast of the unit, adjacent to old State Highway 95, is a pole-fence livestock corral.

Adjacent to State Highway 95 is the Mule Canyon Ruins Rest Stop. This interpretive rest stop is just outside the WSA's boundary.

From the boundary road in Section 20 a way through the pinyon-juniper is about 0.3 mile long. Also, in a few places, vehicle tracks extend into the unit for short distances from State Highway 95.

B. Solitude

Approximately 87 percent (5,190 acres) of the WSA has outstanding opportunities for solitude. The north and south forks of Mule Canyon provide outstanding opportunities for solitude because of terrain and vegetation. The two forks are each about 5 miles long. They cut 500 feet deep into the mesa on the west but are only 80 feet deep where they leave the WSA. Pinyon, juniper, cottonwoods, ponderosa pine, and Douglas fir trees combine with the terrain to enhance seclusion within the WSA.

The two canyons of the WSA are the main recreational routes. They provide a limited number of travel choices because there are no major side drainages. With increased use the opportunities for solitude would be reduced as a single party could hike both canyons in a day's time. About 13 percent (800 acres) of the WSA do not meet the criterion for outstanding opportunities for solitude.

Sights and sounds from the adjacent State Highway 95 limit opportunities for solitude in the WSA up to the rim of the South Fork of Mule Canyon. Farther north in the WSA, beyond the rim of the canyon, the pinyon-juniper woodlands and the deep canyons screen highway sights and sounds.

C. Primitive and Unconfined Recreation

All 5,990 acres within the WSA offer outstanding opportunities for primitive and unconfined recreation. The deep, narrow, winding canyons provide opportunities for hiking and exploration.

Hiking in Mule Canyon is varied in the level of difficulty. In the middle and lower sections of the canyons, gravel wash bottoms and cattle trails facilitate hiking. The upper ends of the canyons are more challenging, as the canyons become steeper and boulders and ponderosa pine trees choke the narrow canyon bottoms.

The easy access to this WSA from State Highway 95 on the south and Texas Flat road on the east enhances the opportunity for primitive recreation but could also detract from the recreation experience by facilitating increased numbers of visits.

The WSA includes two 5-mile segments of canyons that tend to channel users, limiting the unconfined nature of hiking to up-and-down the canyons.

Other opportunities for primitive and unconfined recreation include backpacking; rock climbing and scrambling; hunting, exploration, nature study, and observing features of geologic and archaeological interest.

D. Special Features

Archaeological values are high and are of special interest to visitors of the WSA. There are 37 known Anasazi sites within the WSA, most of which are cliff dwellings. These picturesque ancient structures add elements of discovery and education to the primitive recreation experience.

The WSA also contains special geological features such as arches and natural bridges. Additionally, 53 percent of this WSA has outstanding scenery characterized by smooth red sandstone and the contrasting greens of Ponderosa pine and Douglas fir. The scenery adds to the enjoyment of hiking in this naturally beautiful area.

Cougars, which are often associated with wilderness, frequent the WSA. Peregrine falcons and bald eagles, which are listed as endangered species, may occasionally visit the WSA. Seven other animal species and two plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (4,500 acres) and pine-Douglas fir forest (1,490 acres). Both PNV types are represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2, from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,139,505
Pine-Douglas Fir Forest	6	125,523	7	17,442
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	54	1,701,698
Pine-Douglas Fir Forest	1	45,000	1	3,750

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mule Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the WSA. A Mule Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are four designated wilderness areas within 100 miles of the WSA. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]). To the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA could be managed as wilderness. There are no State or private lands in the WSA. No surface-disturbing activities are projected for the area following wilderness designation. There are no oil and gas leases in the WSA. There is one pending oil and gas lease covering 200 acres in the WSA. There are no mining claims, as well as little or no potential for locatable minerals. Domestic livestock grazing would continue as presently authorized.

Approximately 11 miles of roads which form a portion of the WSA boundary would remain open to vehicular use. Despite traffic along these roads, outstanding opportunities for solitude exist in 87 percent of the WSA. Unauthorized ORV use poses an administrative problem along the southern boundary of the WSA due to the lack of fences and flat terrain along portions of the State Highway 95 right-of-way.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Mule Canyon WSA (USGS Bulletin 1755-B, Dana J. Bove, et al., 1989). The report indicated that no mineral resources were identified during field examination in the WSA except for common-variety sand and gravel and there is no history of mineral production.

The potential for undiscovered oil and gas is moderate. The potential for undiscovered coal, geothermal resources, and metals, including uranium and thorium, is low. Sandstone and sand and gravel have no unique qualities, but could have limited local use for road surfaces or other construction purposes. Similar materials are abundant outside the study area, however.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 221 inputs specifically addressing this WSA were received from 1,019 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the

same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 202 commenters supported wilderness designation for part or all of the WSA, while 812 commenters were opposed. Five commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the primitive recreation opportunities in the WSA, special features, and general wilderness qualities. They noted that wilderness designation would protect the area from development. The majority of those commenting were from other states.

Those opposing wilderness were concerned that wilderness would harm local and State economies and that wilderness designation is unnecessary as there is already enough wilderness and the area can be adequately protected by other means of management. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM, commented on the Draft EIS for this WSA. USBM did not take a position regarding designation of the WSA but commented that BLM underrated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are no State sections or private lands in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the Mule Canyon WSA has moderate to high wilderness values and low conflicts; however, the State commented that an administrative designation to facilitate special management of outstanding cultural values is preferable to a wilderness designation. In addition, the State commented that the reports on the oil and gas potential of the WSA were conflicting, and further study was recommended.

The Mule Canyon WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Mule Canyon WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan. The Commission noted that the area is bounded by roads and is too small to be anything but marginal wilderness. The Commission believes that BLM has underestimated the mineral potential of the WSA. The Commission also pointed out that State inholdings would conflict with wilderness management and that the WSA is geologically and ecologically identical to other areas already protected in the Glen Canyon National Recreation Area, National Parks, National Monuments and FS wilderness within the Colorado Plateau and in San Juan County.

MULE CANYON WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives: Recommendation All Wilderness (5,990 Acres)	Alternatives: No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the WSA.	Wilderness values would not be protected by wilderness designation. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 20 acres and indirectly reduced in quality on up to 590 acres. Special features would not be significantly affected. Vehicular use including use of 0.3 mile of existing way and future mineral exploration roads, would detract from opportunities for solitude and primitive recreation.
Impacts on Mineral and Energy Exploration and Production	The potential for oil and gas exploration would be foregone. There would not be a significant loss in production of any mineral or energy resources because the probability of development is low even without wilderness designation.	Implementation of the No Action/No Wilderness Alternative would not adversely affect mineral exploration or production because minerals could be leased, claimed, and developed as at present. Approximately 80 percent of the WSA would be open to mineral exploration and development with special conditions to protect cultural and scenic resources and primitive recreation opportunities (Category 2). Approximately 20 percent of the WSA would be open to mineral leasing with stipulations to prevent surface occupancy (Category 3), and open for mineral entry with an approved plan of operations.

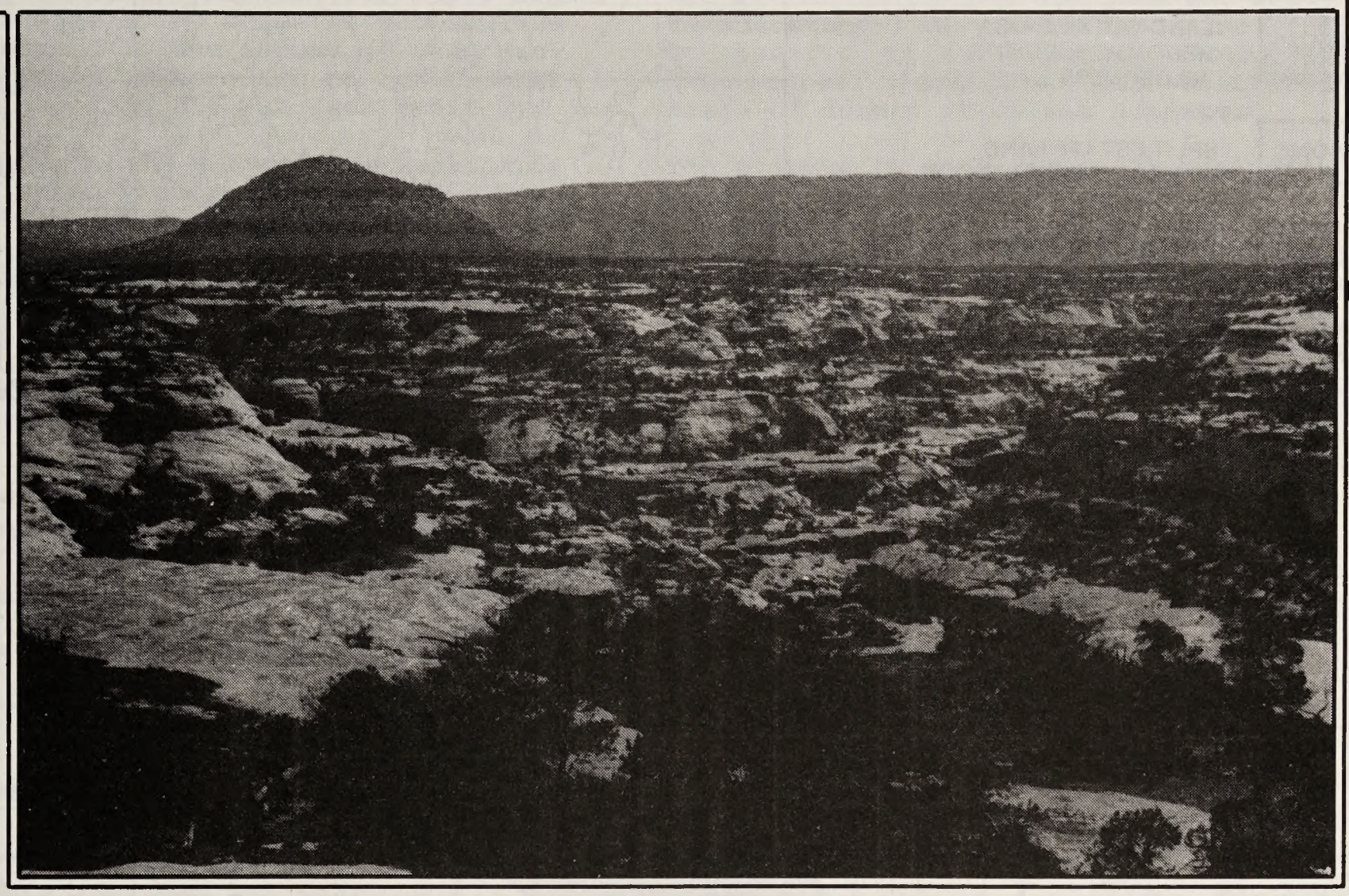
MULE CANYON WSA

Table 3 (Continued)
Comparative Summary of Impacts by Alternative

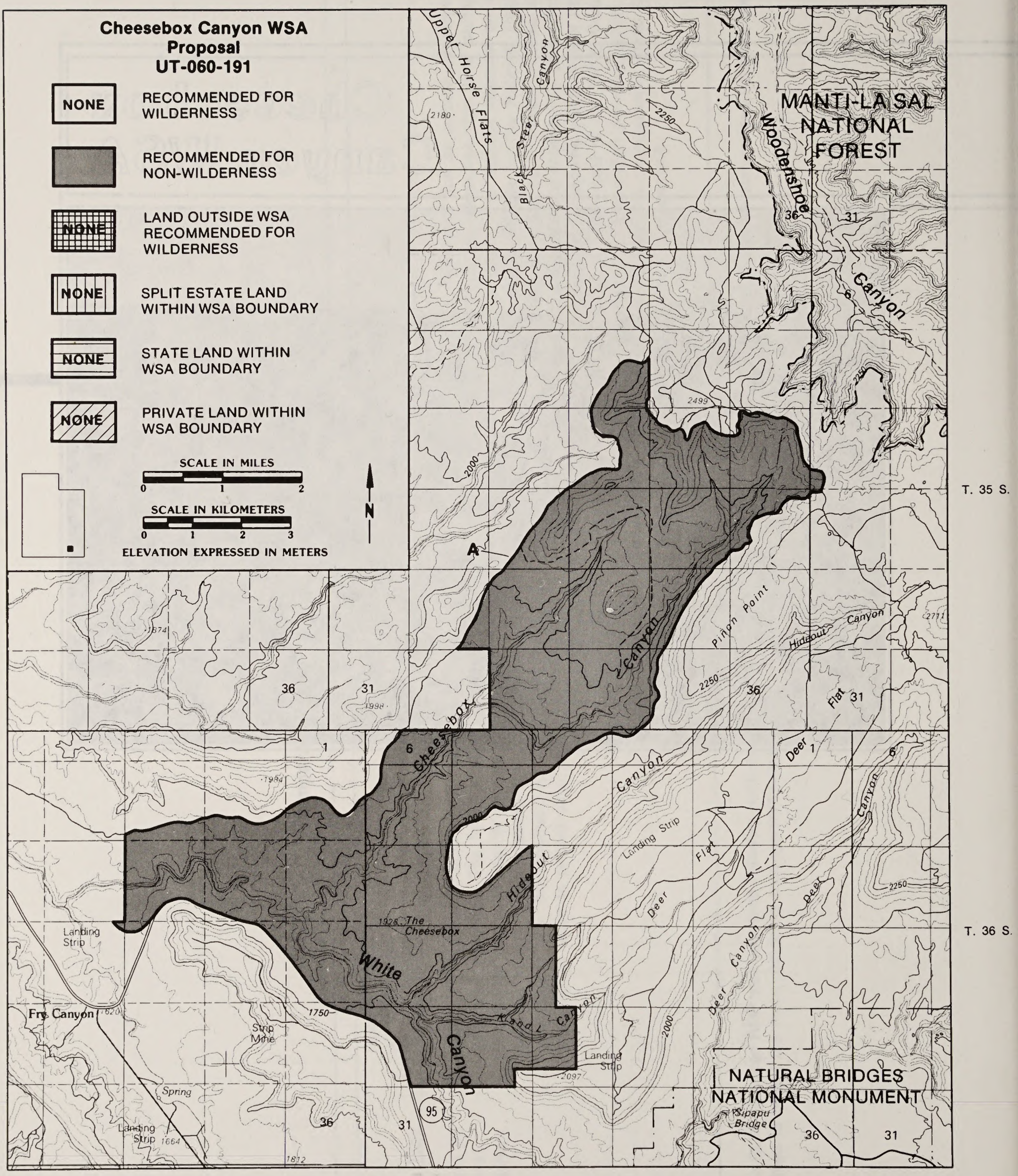
Issue Topic	Alternatives: Recommendation All Wilderness (5,990 Acres)	No Action/No Wilderness
Impacts on Cultural Resources	Cultural resources including 37 recorded sites would receive additional protection. The benefits of protection from most surface disturbance and all vehicular access would probably outweigh any negative effects from increased vandalism due to increased future recreational use. Management may be restricted in scope and execution in order to protect other wilderness values.	Little impact to cultural resources due to surface development is expected with this alternative. Measures that limit surface disturbance would reduce direct and indirect impacts on cultural resources. Cultural properties eligible for the National Register of Historic Places would be surrounded by an avoidance area sufficient to allow permanent protection. Vehicle access may be limited under the San Juan RMP to assist in decreasing illegal artifact collection and excavation in the northwestern part of the WSA. Cultural resources would be managed for information potential, public values, and conservation. Cultural resource management would continue without regard to wilderness management.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

Cheesebox Canyon WSA



CHEESEBOX CANYON WSA



October 1991

CHEESEBOX CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 15,410 acres

The Cheesebox Canyon Wilderness Study Area (WSA) (UT-060-191) is in San Juan County, about 34 miles west of Blanding, Utah (population 3,118). The study area is an irregular unit shaped like an inverted "T" oriented with the stem pointing northeast, defined by roads, terrain, and State sections (see Map). The WSA contains 5,990 acres of public land administered by the Bureau of Land Management (BLM). There are no non-Federal lands inheld in the WSA (see Table 1).

The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province. The study area is a small mesa capped by The Cheesebox and cut by four meandering, steep-walled canyons which drain southwesterly into White Canyon.

A portion of White Canyon crosses the southwestern portion of the WSA.

The surface of the mesa slopes gently southwest, and is almost featureless except for a few low buttes. Elevations in the study area range from 6,200 feet in the southwest to 8,200 feet in the northwest.

About half of the area is barren of vegetation. Most of the remainder of the WSA is pinyon-juniper woodland and scattered stands of Ponderosa pine and Douglas-fir on north-facing slopes at the higher elevations with scattered areas of desert shrub and grasses.

The climate is semiarid, with cool winters and warm summers.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	15,410
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	15,410
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	15,410
Split-Estate	0
Total BLM land not recommended for wilderness	15,410
In-holdings (State, Private)	0

Source: BLM File Data

Two alternatives were analyzed in the EIS: a no wilderness (no action) alternative, which is the recommendation in this report, and an all wilderness alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes the southern half (approximately 7,800 acres) of the Cheesebox Canyon WSA in a Scenic Highway Corridor Area of Critical Environmental Concern (ACEC) to maintain scenic quality as viewed from highways U-95, U-261, and U-276. Special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; disposal of mineral materials subject to visual quality considerations; private and commercial use of woodland products in designated areas only, except on-site collection of dead wood for campfires would be allowed; limitation of off-highway vehicle (OHV) use to existing roads and trails; management to limit recreation use if scenic values are being damaged; management to meet Visual Resource Management (VRM) Class I objectives.

Special management requirements in the northern half of the WSA, which is not included in the ACEC, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to protect scenic resources, management to meet VRM Class II objectives and limitation of OHV use to existing roads and trails.

2. RECOMMENDATION AND RATIONALE:
   0 acres
   (recommended for wilderness)
   (15,410 acres
   (not recommended for wilderness)

The recommendation for this WSA is to release the entire area for uses other than as wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

Although all of the WSA is in a natural condition and 60 percent has outstanding opportunities for solitude and primitive recreation, wilderness management problems exist because of outside sights and sounds. Traffic on State Highway 95, adjacent to the southern boundary, adversely affects solitude on the mesa in the southwestern third of the WSA.

Approximately 7,800 acres of the WSA are in a Scenic Highway Corridor ACEC where restrictions on OHV use, mineral and energy exploration, visual impacts, and woodland harvest would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

No mineral exploration and development is expected in the area, but mineral development is predicted on the mesa which is adjacent to and higher than the WSA. Sights and sounds resulting from such development would further reduce outstanding opportunities for solitude in the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Overall, all 15,410 acres of land within the borders of Cheesebox WSA appear natural.

The large expanses of exposed slickrock and steep-sided canyons and buttes within the WSA characterize its naturalness.

Since establishment of the WSA, approximately 1 acre has been disturbed. This disturbance is the result of seismic geophysical exploration conducted in

1982. This work consisted of drilling shallow exploratory holes every 220 feet along an existing way. A portable drill was used and no new access was required. Minimal site preparation was required. This disturbance has been reclaimed to a substantially unnoticeable condition.

The major imprint inside the WSA boundary is a way that intrudes into the unit from the western boundary road for 4.1 miles. It winds around the head of the west fork of Cheesebox Canyon along the plateau and ends at the rim of the east fork of Cheesebox Canyon. It was originally constructed with mechanical equipment, but is now maintained solely by the passage of vehicles.

Just below the rim of Home Mesa, cuts have been made by a bulldozer probably in search of uranium deposits. These cuts total about 2 miles, exposing soil on the steep hillside. These cuts lead nowhere in particular and are not traveled regularly.

Forming the unit's eastern boundary, a road cuts through the forested slope of Pinyon Point. This road is the unit's boundary for 6.7 miles to Lone Butte. At Lone Butte the road switchbacks 600 feet up to the butte top. A fork of this road cuts across the eastern cliff face of Lone Butte, ending at a mine just around the tip of the butte. This mining activity is evident from a distance because of gray tailings that have spilled down the side of the red butte.

A short way leaves State Highway 95 on the unit's extreme southwest, weaves among the sparse pinyon-juniper trees, and loops back on itself at the edge of a State section.

A few range-associated imprints are concentrated in a canyon just east of Nook Canyon. On the western rim of the canyon there is an old brush-fence corral about 30 yards in diameter. A stock trail has been constructed leading from this corral into the small canyon. The trail is perhaps 75 yards long with rock-blasting evident in a few places. Where this trail meets the canyon bottom, a four-strand barbed wire fence spans the canyon bottom. Just up the canyon from this fence, the wash bottom forks and two pour-offs prevent further travel. A developed spring is located in this portion.

At the western foot of Ram Mesa, a seismic line crosses the boundary road into the unit. This line is well screened by the pinyon and juniper trees on the ground but shows up clearly from the air or high points of the WSA.

A stock trail climbs a ridge on the unit's northeast side up to Home Mesa. This trail is referred to as the Gravel Trail. Wheeled travel on this trail is not possible. The trail makes use of a slickrock wash where it leaves the boundary road. This trail is not a substantial impact upon wilderness values; it is an eroding trail 3 to 5 feet wide.

The horse trails in Hideout and Cheesebox Canyons are overgrown from lack of use.

B. Solitude

About 24 miles of deep, narrow, and tightly meandering canyons provide outstanding opportunities for solitude.

Cheesebox Canyon cuts into relatively flat pinyon-juniper covered terrain that is enclosed by highlands rising 550 to 1,000 feet above this intermediate plateau. The eastern and western boundary roads run along the bases of these higher mesas and comprise substantially noticeable cuts through the forested mesa land and intrude upon a visitor's feeling of isolation. The uranium mines and exploration cuts on the mesa cliff slopes of Home Mesa, Pinyon Point, Lone Butte, Fry Mesa (across State Highway 95), and Found Mesa also comprise highly visible imprints of human activity outside, yet near, the unit.

Major commercial airline traffic over the WSA, although not always heard, is fairly constant daily. Its impact on wilderness solitude is negligible, although contrails sometimes streak the sky.

The cuts and fills of State Highway 95 can be seen from as far as the northern end of the unit. Although traffic is not heavy on this highway, sights and sounds of highway traffic are an influence into the WSA for a substantial distance.

Headlights at night are especially noticeable in the unit. Due to the above factors, a substantial portion of the WSA (6,100 acres) does not offer outstanding opportunities for solitude. Within the canyons of this unit, however, these outside influences are largely blocked. Even part of White Canyon, less than 1 mile from the highway, is sufficiently deep and narrow to block outside sights and sounds.

Overall, in over 60 percent of the WSA (9,310 acres) the opportunities for solitude meet the outstanding criteria.

C. Primitive and Unconfined Recreation

The outstanding opportunities within the canyons and northern portion of the WSA (9,310 acres) allow this WSA to meet the outstanding primitive and unconfined recreation criteria.

The canyons and buttes rising above the plateau offer varied challenges to the primitive recreationist. Traversing the canyons is sometimes very challenging due to pour-offs or pools of water, and getting out the sides is often very difficult. Hiking and camping opportunities include backpacking, dayhiking, rock scrambling, swimming in the plunge pools, hunting, and exploring and discovering side canyons, seeps, pools, sculptured sandstone formations, and ancient Indian ruins. Nature study and sightseeing pursuits are also available.

The WSA has an irregular boundary, which is less than 1 mile wide in places. Additionally, in the southern half of the WSA, only the area within the canyons offers outstanding solitude, further confining the area's primitive recreation opportunities. Approximately 6,100 acres do not meet the outstanding recreation criteria.

D. Special Features

Twelve recorded archaeological sites are within the unit. Late 19th and early 20th century cowboys roamed the canyons of southeast Utah herding cattle.

Hite was a popular Colorado River crossing in those days and the rim of White Canyon was used as a route to points further east. Outlaws also used these canyons, disappearing in Hideout Canyon occasionally.

Peregrine falcon and bald eagle, listed as endangered species, may make occasional use of the WSA. Seven other animal species and four plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

The WSA is within the White Canyon-Red Canyon Desert Bighorn Sheep Habitat Management Area. Desert bighorn sheep utilize the upper ends of Cheesebox Canyon, as well as Found Mesa and Fry Point. Each year a limited number of desert bighorn sheep permits are issued to hunters on a once-in-a-lifetime basis. The sheep are a prized big game trophy.

Natural Bridges National Monument is less than 2 miles to the east and includes part of White Canyon. Hikers from the monument sometimes extend their trips into the WSA portion of White Canyon.

The entire WSA is rated Class A for scenic quality. The canyon is sculptured rock with swirling patterns, carved pools, and sheer rock walls.

Views from the WSA include the cliffs of the highlands to the east, the Wingate Buttes, Navajo Mountain, the Henry Mountains, and the valley of White Canyon, all features outside of the unit.

The WSA contains special geologic features such as arches and natural bridges.

Although there is no perennial stream present, White Canyon was identified in the Nationwide Rivers Inventory as a possible addition to the National Wild and Scenic River System. The inventory found White Canyon to be an excellent example of intermittent streams in this region.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (9,250 acres) and saltbush-greasewood (6,160 acres). This combination of PNV types in the WSA are not now represented in the NWPS nationally or in Utah, although they are represented in other BLM study areas in and outside of Utah, and the saltbush-greasewood PNV is represented in the NWPS outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Cheesebox Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the WSA.

A Cheesebox Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres.

There are four designated wilderness areas within 100 miles of the WSA. To the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), to the southwest is the 112,400-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM) and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The area could be managed as wilderness; however, activities outside of the WSA will continue to degrade wilderness values within the WSA.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	220,814
Saltbush-Greasewood	3	45,553	37	1,025,447
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	220,814
Saltbush-Greasewood	0	0	8	140,685

Source: BLM File Data.

Opportunities for solitude are adversely impacted in 40 percent of the WSA by the sights and sounds of roads and traffic on State Highway 95. Opportunities for solitude may be further degraded by potential mineral exploration and development on lands (State and Federal) adjoining the WSA.

There are 98 existing mining claims in the WSA but the potential for valid discoveries and eventual production are low. No oil and gas leases exist, and the potential for oil and gas resources is low in the WSA. Based on these conditions, no surface disturbance is anticipated in the WSA if it is designated wilderness. Off-highway vehicle (OHV) use can be controlled because the rugged topography and limited access restrict vehicle use. Domestic livestock grazing would continue as authorized but would not significantly detract from wilderness values. There are no inholdings or other valid rights that would complicate wilderness management.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for this WSA. According to BLM geologists and a summary by the USGS and the USBM, the WSA has low potential for oil and gas and for uranium and other metallic minerals. There are no known deposits of leasable or locatable minerals in the WSA. A few exploratory oil wells have been drilled in the vicinity of the WSA, and all were abandoned. The WSA is within the White Canyon uranium mining district. The uranium deposits are concentrated in the Shinarump Member of the Chinle Formation. Although the WSA is surrounded by favorable strata of the Chinle Formation, most of the Chinle, except in one small knoll (totaling about 10 acres) has been eroded.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 158 inputs specifically addressing this WSA were received from 1,347 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 364 commenters supported wilderness designation for part or all of the WSA, while 976 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the need to preserve the area for future generations, add the diversity of the WSA to the NWPS, and to protect wilderness values in the study area from development. The majority of those commenting were from other states.

Those opposing wilderness were concerned that wilderness would restrict public access and harm local and State economies. They also felt that there is no need for more wilderness and that the study area will stay as it is now without designation and that other kinds of management are sufficient. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the NPS and USBM, commented on the WSA in the Draft EIS. USBM did not take a position regarding designation of Cheesebox Canyon WSA but

commented that BLM underrated the petroleum potential of the WSA.

The NPS favored the all wilderness alternative and recommended that State sections adjacent to the WSA be considered in the Final EIS as potential additions to the area when nonconforming uses on these lands cease. The NPS favored designation as a means to protect desert bighorn sheep which occur in part of the WSA. Additionally, the NPS stated that a wilderness designation for Cheesebox Canyon WSA would complement the possible reintroduction of bighorn sheep at Natural Bridges National Monument by providing relatively undisturbed habitat for the sheep.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. There are five State sections adjacent to the WSA boundary. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the WSA has moderate wilderness values and moderate to low conflicts. The State commented that an administrative designation to facilitate special management of cultural values is preferable to wilderness designation.

The Cheesebox Canyon WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Cheesebox Canyon WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan. The Commission noted that underlying natural resources are not insignificant and access should not be precluded. The WSA is surrounded by visible roads and two additional roads penetrate the area. The Commission also pointed out that State holdings along the boundary of the WSA would conflict with wilderness management and that the WSA is geologically and ecologically identical to other areas already protected in the Glen Canyon National Recreation Area, National Parks, National Monuments and FS wilderness within the Colorado Plateau and in San Juan County.

CHEESEBOX CANYON WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

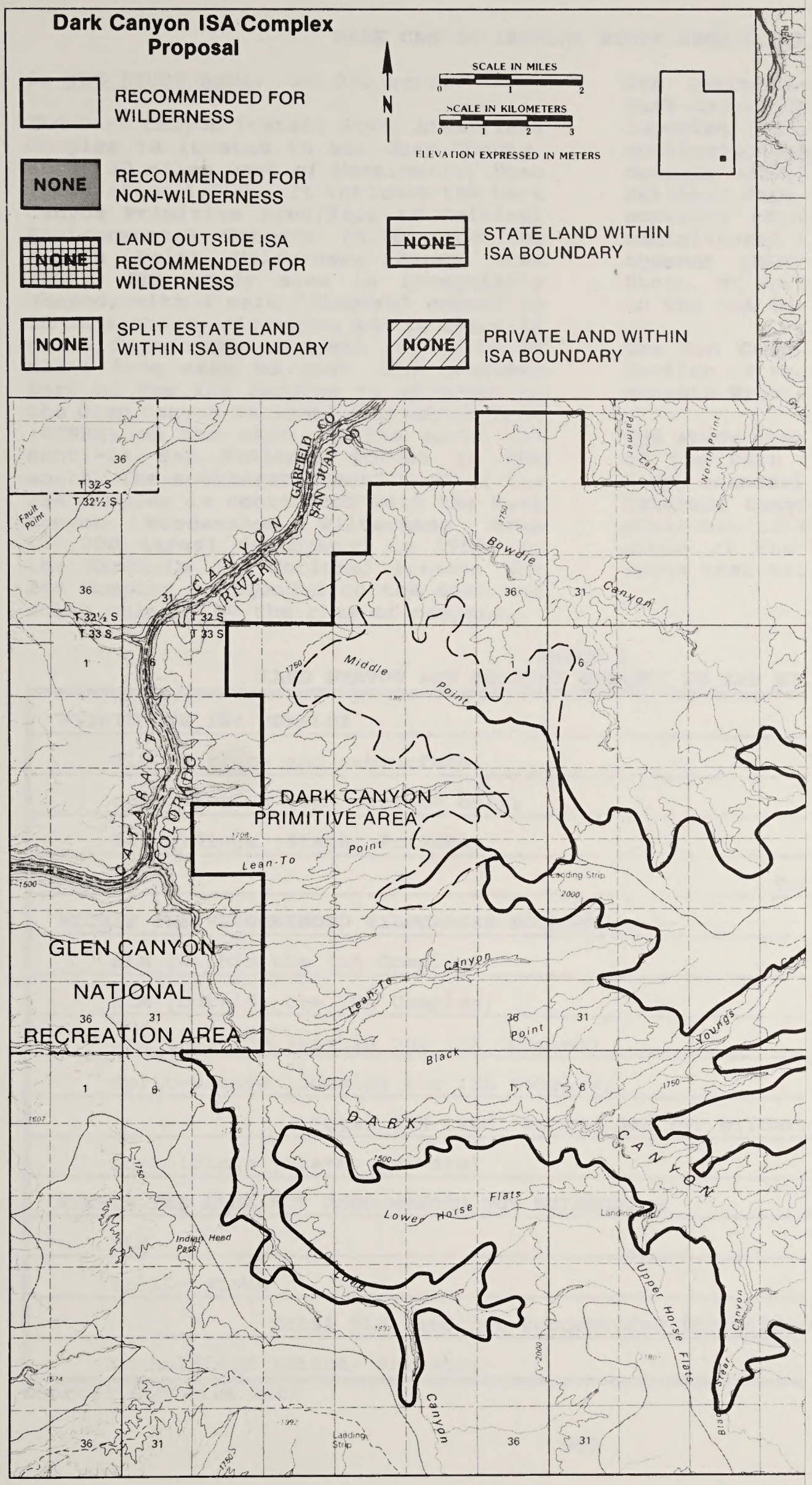
Issue Topic	Alternatives: Recommendation — No Action/No Wilderness	Alternatives: All Wilderness (15,410 Acres)
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 2 acres and indirectly reduced in quality on about 154 acres due to development of rangeland projects. Special features would not be significantly affected. Vehicular use of ways would continue to occasionally detract from opportunities for solitude and primitive recreation in the WSA.	Wilderness designation would preserve wilderness values, in the WSA. In the foreseeable future, disturbance from rangeland development would result in a direct reduction in the quality of naturalness and opportunities for solitude and primitive recreation on 1 acre, and an indirect temporary reduction in the quality of wilderness values on up to 25 acres. Because wilderness management criteria would be met, wilderness values would not be lost.
Impacts on Recreation	The quality of primitive recreation would be slightly reduced by construction of rangeland projects and continued (light) vehicular use of 5 miles of ways. Vehicle-based recreational opportunities would not be affected. The wild and scenic river values of White Canyon would be protected by existing regulations and because it is in a Scenic Highway Corridor ACEC. Both primitive and motorized recreational use would increase.	Primitive recreational values and wild and scenic river values would be protected. Vehicular recreation opportunities would be precluded on 5 miles of ways. Loss of the opportunity for vehicle use would not be significant because the WSA is not a destination area for such activities. Primitive recreational use would increase.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

Dark Canyon Complex



DARK CANYON


Dark Canyon ISA Complex Proposal
RECOMMENDED FOR WILDERNESS
NONE
RECOMMENDED FOR NON-WILDERNESS
NONE
LAND OUTSIDE ISA RECOMMENDED FOR WILDERNESS
NONE
SPLIT ESTATE LAND WITHIN ISA BOUNDARY
NONE
STATE LAND WITHIN ISA BOUNDARY
NONE
PRIVATE LAND WITHIN ISA BOUNDARY
N
SCALE IN MILES
0 1 2
SCALE IN KILOMETERS
0 1 2 3
ELEVATION EXPRESSED IN METERS
DARK CANYON PRIMITIVE AREA
GLEN CANYON NATIONAL RECREATION AREA
CANYON RIVER
GARFIELD CO
SAN JUAN CO
CATARACT COLORADO
Fault Point
Bowdie Canyon
Palmer Can
North Point
Middle Point
Lean-To Point
Lean-To Canyon
Landing Strip
Black Point
Youngs
DARK CANYON
Lower Horse Flats
Upper Horse Flats
Indian Head Pass
Long Canyon
Black Steer Canyon
T 32 S
T 32½ S
T 33 S
36
31
1
6
R. 16 E.
R. 17 E.

DARK CANYON ISA COMPLEX

Dark Canyon ISA Complex Proposal

RECOMMENDED FOR WILDERNESS

NONE — RECOMMENDED FOR NON-WILDERNESS

NONE — LAND OUTSIDE ISA RECOMMENDED FOR WILDERNESS

NONE — SPLIT ESTATE LAND WITHIN ISA BOUNDARY

NONE — STATE LAND WITHIN ISA BOUNDARY

NONE — PRIVATE LAND WITHIN ISA BOUNDARY

N

SCALE IN MILES 0 1 2

SCALE IN KILOMETERS 0 1 2 3

ELEVATION EXPRESSED IN METERS

CANYONLANDS

DARK CANYON PRIMITIVE AREA (NORTHERN PORTION)

DARK CANYON PRIMITIVE AREA

GLEN CANYON NATIONAL RECREATION AREA

MANTI-LA SAL NATIONAL FOREST

T. 32 S.

T. 33 S.

T. 34 S.

R. 16 E.

R. 17 E.

R. 18 E.

October 1991



DARK CANYON INSTANT STUDY AREA COMPLEX

1. THE STUDY AREA: 68,030 acres

The Dark Canyon Instant Study Area (ISA) Complex is located in San Juan County, about 30 miles west of Monticello, Utah (population 1,929). It includes the Dark Canyon Primitive Area/Area of Critical Environmental Concern (ACEC) and the Middle Point Wilderness Study Area (WSA). The study area is irregularly shaped, with 4 main "fingers" extending in an easterly direction and is about 15 miles from north to south and up to 15 miles from east to west. The southern part of the ISA Complex is adjacent to the Glen Canyon National Recreation Area (GCNRA) on the east and the north and Manti-La Sal National Forest to the south. The southeasternmost edge of the ISA Complex is contiguous with the Dark Canyon Woodenshoe Wilderness Area (60,000 acres) designated in 1984, in the Manti-La Sal National Forest. The ISA Complex is bounded on the east and south chiefly by the rims of canyons.

The isolated northern portion of the Dark Canyon Primitive Area is north of Imperial Valley and Beef Basin and is contiguous with the proposed Maze Wilderness (105,980 acres) in Canyonlands National Park (see Map). The ISA Complex contains 68,030 acres of public land administered by the Bureau of Land Management (BLM). There are no private, State, or split-estate land in-holdings in the ISA Complex (see Table 1).

The ISA Complex is in the Canyonlands Section of the Colorado Plateau Physiographic Province.

The study area is a complex of fragments of the Dark Canyon Plateau and seven deep, meandering canyons that drain into Cataract Canyon of the Colorado River, northwest of the ISA Complex. The remnants of the Dark Canyon Plateau are mesas that slope gently westward.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE ISA COMPLEX	ACRES
BLM (surface and subsurface)	68,030
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	68,030
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the ISA Complex)	68,030
BLM (outside the ISA Complex)	0
Split-Estate (within the ISA Complex)	0
Split-Estate (outside the ISA Complex)	0
Total BLM land recommended for wilderness	68,030
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

The canyons are as much as 2,000 feet deep and are generally steep, with step-like "pour-offs" up to 300 feet high. The canyons are extremely narrow in places and quite wide in others, with cottonwood trees and low buttes on the floors. An unusual feature in the canyon lands country is the 10 miles of perennial streams that flow through northern portion of the study area in a series of plunge pools and waterfalls. Elevations in the ISA Complex range from 5,800 feet in the northwestern corner to 6,600 feet at the northeast. Pinyon-juniper and blackbrush are the predominant vegetation. The climate is semiarid, depending on elevation, with cool to cold winters and warm summers.

The ISA Complex was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report; a no wilderness (no action) alternative; and a partial wilderness alternative where 62,040 acres would be designated wilderness and 5,990 acres would be released for uses other than wilderness.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes 62,040 acres of the Dark Canyon ISA Complex (the area corresponding to the Dark Canyon Primitive Area) in the Dark Canyon Area of Critical Environmental Concern (ACEC) to protect scenic values and natural values associated with primitive recreation. Special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: closure to mineral leasing (Category 4), closure to geophysical work, and disposal of mineral materials; proposed withdrawal from locatable mineral entry; exclusion from private and commercial use of woodland products except for limited on-site collection of dead wood for campfires; exclusion from livestock use except in Fable Valley where livestock trailing and emergency grazing would be allowed; closure to off-highway vehicle (OHV) use; management to meet Visual Resource Management (VRM) Class I objectives; management to limit recreation use if cultural resources or scenic values are being damaged.

The Middle Point WSA (5,990 acres) portion of the ISA Complex is not included in the Dark Canyon ACEC.

In this area, the special management requirements now in effect, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to limit surface use (Category 2); private and commercial use of woodland products in designated areas only; construction of range improvements and new land treatments so long as they meet VRM class II objectives; limitation of OHV use to designated roads and trails; construction of development projects that blend with the natural character of the land.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   68,030 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this ISA Complex is to designate all of the area, 68,030 acres, as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

The area that is recommended for wilderness designation includes the Dark Canyon Primitive Area/ACEC of 62,040 acres and the adjacent Middle Point WSA which totals 5,990 acres. All of the recommended area is in a natural condition and has outstanding opportunities for solitude and primitive recreation.

Approximately 62,040 acres of the area are in the Dark Canyon ACEC where restrictions on OHV use, mineral and energy exploration and production, mineral material disposal, woodland harvest, visual impacts, and livestock use would continue to be administratively applied if the area is released from

wilderness consideration and protection of wilderness characteristics is not a management objective.

No significant conflicts exist with minerals or other resource uses or activities. The primitive area was withdrawn from mining claim location in 1970 and is also closed to mineral leasing.

Designation of the area would complement the existing Dark Canyon Wilderness east of the ISA Complex in the Manti-La Sal National Forest and wilderness proposed to the north and west, in the GCNRA, and the Canyonlands National Park, north of the ISA Complex. These areas of wilderness and proposed wilderness together would form a wilderness cluster of about 251,230 acres.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Less than 1 percent of the ISA Complex is impacted by imprints of man. The entire 68,030 acres meet the naturalness criteria.

Dark Canyon was declared a primitive area by the BLM in December of 1970 to protect its outstanding natural beauty and unspoiled condition. The area has only a few ways involving a total of about 7.5 miles, projecting short distances across the unit's boundary. For the most part, the primitive area boundaries were drawn along the canyon rims. Thus, the steep and rugged terrain has precluded human influence and the land retains its primeval character.

Seven miles of the 7.5 miles of ways in the ISA Complex are within the Dark Canyon Primitive Area, and are closed to vehicular use.

Most of the Middle Point area is natural, free of human imprints. A road forms part of the unit's eastern border, then is cherry-stemmed for 3 miles on Middle Point. Another road forms part of the unit's southern boundary, and is cherry-stemmed for 3 miles to Lean-To Point. These seldom-traveled dirt roads are thus not within the ISA Complex.

Imprints within the ISA Complex include a chaining, an old U.S. Geological Survey (USGS) Bench Mark, a drill pad site, and a developed spring and associated way. Vehicle tracks also fork off the southern road for approximately a 0.5 mile and are a minor imprint.

The chaining at the end of the Middle Point road was done in 1956. Approximately 80 acres of sage flat with scattered pinyon and juniper trees were chained and seeded for improved livestock grazing. With decomposing deadfall and with sage and young trees reestablishing, it appears as a natural sage flat.

Adjacent to the cherry-stemmed road on Middle Point, a drill pad site used in the 1960s is marked by a steel drill hole plug. The site is revegetating with snakeweed and grasses and is not a substantial imprint. Five other oil and gas wells in the ISA Complex also have been rehabilitated and are substantially unnoticeable.

A spring in a small drainage between Lean-To Point and Middle Point was improved sometime around 1960. The improvement consists of a buried cement collection box, about 30 feet of barbed wire fencing, some buried 1/2-inch piping, and an 8 foot square by 2 foot deep metal reservoir. The spring development is in a small draw and is not noticeable outside of about a 100 foot radius. The spring is a 0.5 mile west of the eastern boundary road and vehicle tracks have made a way between the spring and the road.

Since establishment of the ISA Complex, less than 1 acre has been disturbed. The disturbance resulted from hand construction of 20 waterbars on the Fable Valley stock trail in 1985. The impact of this activity is substantially unnoticeable.

B. Solitude

The entire ISA Complex (68,030 acres) has opportunities for solitude that meet

the criterion for outstanding solitude in areas under wilderness review.

The deep, winding, and rugged canyons provide seclusion. Vegetation enhances these opportunities by providing shelter from the sun and screening from other users. Off-site influences are essentially limited to the sounds of airliners and the sight of their vapor trails. With the absence of other influences, these jets sometimes stand out as a reminder of the outside world, intensifying the feeling of remoteness.

On the higher, relatively flat terrain of the Middle Point area, moderately dense stands of pinyon-juniper forest provide screening for users. The Middle Point area is reached by over 30 miles of infrequently traveled dirt road and is usually inaccessible during the winter.

C. Primitive and Unconfined Recreation

The opportunities for primitive and unconfined recreation are outstanding throughout the ISA Complex (68,030 acres). The remote and rugged canyons cut through rock layers and mesas for a total of 75 miles. With this large canyon complex, the challenging terrain, and the unique and varied rock formations, recreationists find many possibilities for primitive and unconfined recreation. The remoteness of the area adds to the enjoyment of the primitive experience.

Among the outstanding opportunities present are hiking, camping, backpacking, exploring, rock scrambling, horseback riding in Fable Valley, swimming or wading in the running water and pools of the various canyons, and hunting. Other forms of primitive and unconfined recreation possible in the ISA Complex are photography, sketching, bird watching, and sightseeing for biological, zoological, and geological features.

Finally, the Colorado River, less than 1 mile west of the boundary of the ISA Complex, has recreational and historical values. Cataract Canyon is a popular white water rafting run through "big drops" and spectacular canyon country. Lake Powell, reaching to the vicinity of Gypsum Canyon, allows boating access to the major canyons of the Dark Canyon ISA Complex.

D. Special Features

Of geological interest are the limestone exposures with red chert nodule inclusions. The limestone also includes cockleshell and crinoid stem fossils. These limestone ledges make the deep and narrow lower Dark Canyon an especially scenic canyon due to their waterfall-producing effect.

Approximately 91 percent of the ISA is rated as outstanding for scenic quality. Unimpaired vistas from the unit enhance the wilderness values present. To the west are the Henry Mountains and the Orange Cliffs, to the north the lands of Canyonlands National Park, and to the east are the La Sal Mountains. Natural arches are not prevalent in the unit, but at least two are known.

Anasazi Indian occupation in the ISA Complex seems to have been somewhat sparse compared to canyons further south such as Grand Gulch. Cliff dwellings, granaries, petroglyphs, and lithic scatters do exist within the ISA Complex. These features enhance the primitive recreation values present and add to the feeling of timelessness in these rugged and remote canyons. Sixty-eight archaeological sites have been recorded, and there is a potential for up to 3,400 sites.

Historic evidence of use of the ISA Complex for cattle and sheep grazing includes a stock trail (Fable Valley), a corral (Fable Valley), and cowboy camps (scatters of cans, bottles, and other debris).

Groups of desert bighorn sheep are occasionally observed by hikers in the canyons of the ISA Complex and by boaters on the Colorado River just west of the unit. All of the major canyons in this ISA Complex have been identified as crucial desert bighorn sheep habitat. Cougars, a species associated with wilderness, inhabit remote canyons in the unit. Being a large inhabitant of wild and remote areas, the cougar has an esthetic value. Most people highly value the sighting of one of these animals in the wild.

Bald eagles are winter transients in the ISA Complex and peregrine falcons may inhabit the ISA Complex. Both are listed as endangered species.

Six other animal species and two plant species that are considered sensitive may occur in the ISA Complex. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this ISA Complex would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

In the ISA Complex, however, the PNV is of the same types as the current vegetation, although in different proportions.

The ISA Complex is in the Colorado Plateau Province/Ecoregion. The PNV in the ISA Complex is blackbrush (43,210 acres) and juniper-pinyon woodland (24,820 acres).

The juniper-pinyon woodland PNV in the ISA Complex is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah, but blackbrush PNV is not represented at all in the NWPS.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The ISA Complex is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Dark Canyon ISA Complex would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and in Arizona and Colorado, the adjacent states nearest the ISA Complex.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	186,854
Juniper-Pinyon Woodland	11	1,401,745	84	2,119,185
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	186,854
Juniper-Pinyon Woodland	1	26,000	53	1,681,378

Source: BLM File Data.

DARK CANYON INSTANT STUDY AREA COMPLEX

A Dark Canyon ISA Complex Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the ISA Complex. About 2 miles to the north is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east, in Colorado, is the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]), and to the northwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The Dark Canyon ISA Complex could be managed as wilderness. There are no private, State, or split-estate lands in the ISA Complex. There are no oil and gas leases or mining claims in the ISA Complex. Approximately 63,290 acres are closed to oil and gas leasing and 62,040 acres are withdrawn from entry under the General Mining Laws in the Dark Canyon Primitive Area portion of the ISA Complex. Although mining claims could be located on the 5,990 acres in the Middle Point WSA portion of the ISA Complex, the low potential for locatable minerals in the area does not support a development assumption.

Domestic livestock grazing and maintenance of one spring development, 7.5 miles of stock trail, and one 80 acre seeding, would continue as presently authorized. This would not significantly reduce wilderness values of the area.

Energy and Mineral Resource Values

The USGS and the U.S. Bureau of Mines (USBM) prepared a map and assessment report for the Dark Canyon ISA Complex (USGS Open File Report 81-734, Joseph L. Weitz and Thomas D. Light, 1981). The report indicates that there is moderate potential for the discovery of uranium deposits in the southernmost part of the ISA Complex; however, the area reported as being favorable for uranium is actually 4 to 8 miles south and east of the Dark Canyon ISA Complex southern boundary. Based on this, the ISA Complex is considered to have little or no potential for uranium deposits.

The potential for development of evaporite minerals and construction materials is low. The potential for discovery of oil and gas is considered to be low except possibly in the eastern part of the ISA Complex. The potential for the development of gypsum is low because of its distance from markets, difficult access, and depth of burial. Salt is present in a few localities near the eastern margins of the study area, but has virtually no resource potential because of its irregular distribution and thickness.

According to BLM geologists, sand and gravel exist in the ISA Complex but have limited potential as a resource because of their remote location and the presence of adequate supplies elsewhere in the region that are closer to possible markets.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on wilderness values which is considered to be the only pertinent resource that would be significantly affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of ISA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the ISA Complex.

During formal public review of the Draft EIS, a total of 166 inputs specifically addressing this ISA were received from 1,359 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the

same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 380 commenters supported wilderness designation for part or all of the ISA Complex, while 975 commenters were opposed. Four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that designation protects wilderness values, would preserve the ISA Complex for future generations, and would add the diversity characteristic of the study area to the NWPS. The majority of those commenting were from other states.

Those opposing wilderness were concerned that wilderness would restrict public access to the ISA Complex and harm local and State economies. They also believed that there is enough wilderness already and there is no need for a Dark Canyon Wilderness, especially as the area can be adequately managed without wilderness designation. Almost all of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the NPS and the Environmental Protection Agency (EPA), commented on the Draft EIS for the Dark Canyon ISA Complex.

The NPS supports the all wilderness alternative because this would provide for a BLM wilderness area contiguous with the proposed wilderness area in Canyonlands National Park. NPS also commented that desert bighorn sheep, cultural resources, and recreational opportunities in the ISA Complex would benefit from wilderness designation.

The EPA did not take a position regarding designation of the ISA Complex. EPA commented that several WSAs near Canyonlands National Park, including the Dark Canyon ISA Complex, should be under similar management or grouped together to form a larger geographical unit, in order to improve upon integrated multiple resource planning.

No comment letters were received on the Final EIS.

There are no State sections in the ISA Complex. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding designation of the ISA Complex. The State commented that Dark Canyon has the highest wilderness-quality values for this region and few significant conflicts. The only conflict which the State identified was with a proposed 80-acre wildlife habitat treatment. The State added that livestock would benefit if the wilderness boundary excluded the mesa tops. The State also commented that lands shown as split-estate are Federal lands since the State mineral leases were relinquished in 1984.

The Dark Canyon ISA Complex is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the ISA Complex as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Dark Canyon ISA Complex and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the ISA Complex as wilderness would be in conflict with the County Master Plan and that the area is penetrated by three roads for greater distances than recognized in the EIS. The Commission also pointed out that State in-holdings would conflict with wilderness management and that the ISA Complex was identical to other areas already protected in the GCNRA, National Parks, National Monuments and FS wilderness within the Colorado Plateau and in San Juan County.

DARK CANYON ISA COMPLEX

Table 3
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (68,030 Acres)	No Action/No Wilderness	Partial Wilderness (62,040 Acres)
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the ISA Complex. This alternative would complement and enhance wilderness values, uses, and management of contiguous Forest Service and National Park Service areas which are either designated wilderness or proposed for wilderness designation.	Wilderness values would not be protected by wilderness designation. However, no disturbance that would affect wilderness values is anticipated. In the foreseeable future. Continued vehicular use of 0.5 miles of way would continue to be an occasional annoyance that would detract from opportunities for solitude and primitive recreation in the ISA Complex. This alternative would not complement or enhance wilderness uses, values, or management of contiguous FS and NPS lands, which are either designated wilderness or proposed for wilderness designation.	Wilderness values would be preserved in the designated area which is approximately 91 percent of the ISA. Naturalness and outstanding opportunities for solitude and primitive recreation and most special features are in the designated portion and would be preserved. No disturbance is anticipated, in the foreseeable future, that would affect wilderness values in either the designated or nondesignated area. This alternative would enhance and complement wilderness values, uses, and management of contiguous FS and NPS lands that are either designated wilderness or proposed for wilderness designation.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

Butler Wash WSA

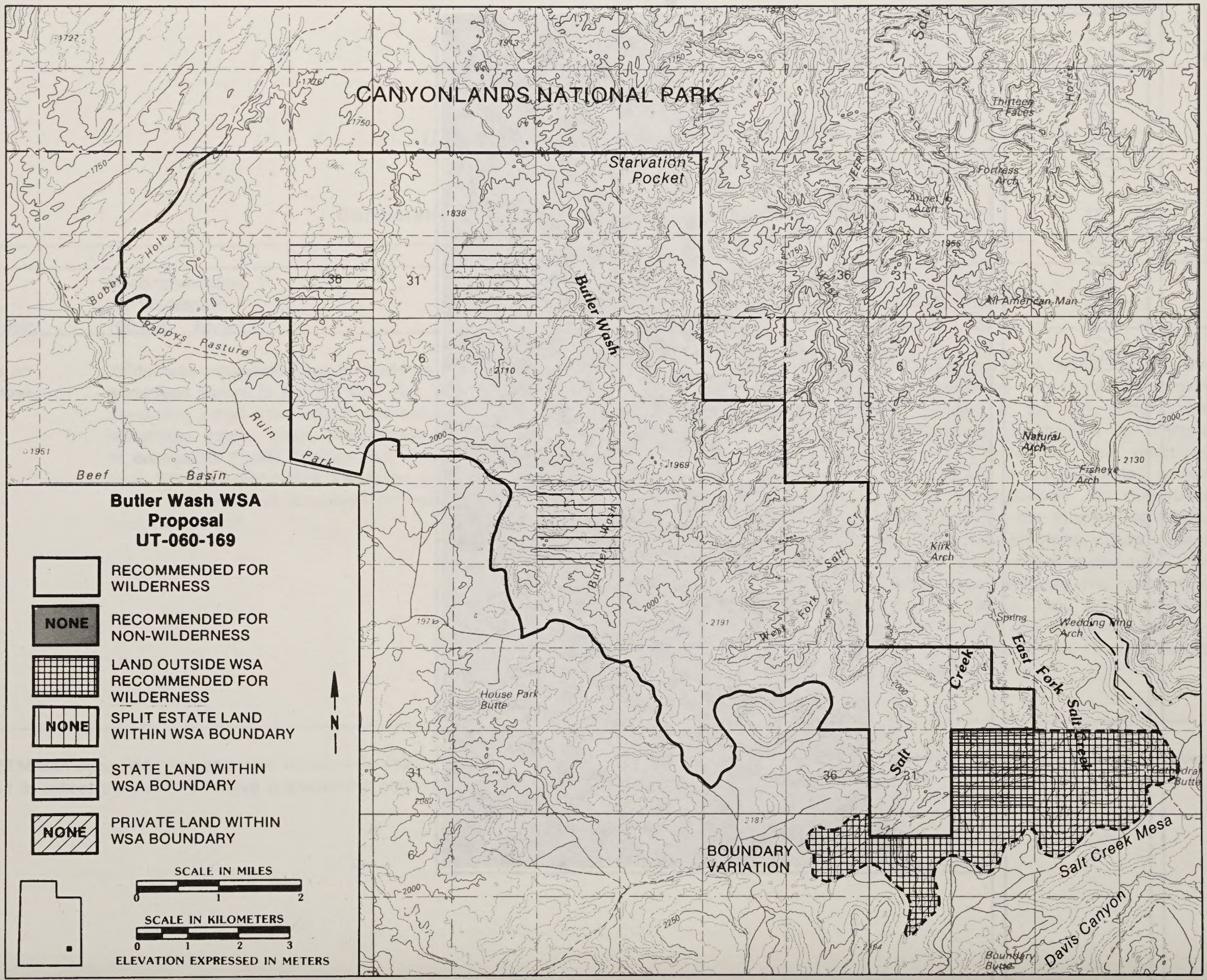


BUTLER WASH WSA

R. 18 E. R. 19 E. R. 20 E.

T. 31 S.

T. 32 S.



October 1991

BUTLER WASH STUDY AREA

1. THE STUDY AREA: 24,190 acres

The Butler Wash Wilderness Study Area (WSA) (UT-060-169) is in northwestern San Juan County, about 55 miles northwest of Monticello, Utah (population 1,929). The study area is about 8 miles long (north to south) and 7 miles wide (east to west) at its longest and widest points. A proposed wilderness in the Needles Section of Canyonlands National Park borders the WSA on the east and the north; roads, and State lands, and section lines form the boundary of the WSA on the west, southwest, and south (see Map). The Butler Wash WSA contains 22,030 acres of public land administered by the Bureau of Land Management (BLM).

BLM's recommended wilderness for this area includes an additional 2,160 acres of public land which increases the size of the reported study area to 24,190 acres. There are three sections (1,920 acres) of State land inheld within the WSA. One additional section is inheld in the recommended area which increases the in-holdings to 2,560 acres (see Table 1).

The study area is in the Canyonlands Section of the Colorado Plateau Physiographic Province. The terrain consists of northward-draining shallow canyons of varying widths and low, park-like mesas, with scattered buttes, knobs, and spires.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	22,030
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,920
Total	23,950
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	22,030
BLM (outside the WSA)	2,160
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	24,190
In-holdings (State, private)	2,560
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The eastern portion of the WSA is more rugged than the western portion. There are no perennial streams in the WSA. Elevations range from 5,600 feet in the southwest to 7,400 feet along the eastern edge. Vegetation is predominantly pinyon-juniper woodland, with sagebrush in the parks. The climate is arid, with hot summers and cool to cold winters.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the BLM Utah Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

The all wilderness alternative includes a boundary modification that increases the study area from its original 22,030 acres to 24,190 acres.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes approximately 13,710 acres of the Butler Wash WSA in the Butler Wash Area of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; closure to disposal of mineral materials; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; management to limit recreation use if scenic values are being damaged; management to meet Visual Resource Management (VRM) Class I objectives.

Approximately 10,480 acres of the WSA are outside of the ACEC boundary. The majority of this area (approximately 9,500 acres) is classified as semi-primitive non-motorized (SPNM class) under the Recreation Opportunity Spectrum classification system and is managed to provide a predominantly natural environment with limited evidence of human use and, where possible, to provide an environment with some opportunity for isolation. Special management requirements now in effect in SPNM class areas in Butler Wash WSA, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to limit surface use (Category 2); construction of range improvements and new land treatments so long as they blend with the natural character of the land; limitation of OHV use to designated roads and trails; construction of projects that blend with the natural character of the landscape.

The remaining portion of the WSA (approximately 1,000 acres) is designated open to OHV use and is classified as semi-primitive motorized under the ROS Classification system. The area is open for mineral leasing, geophysical work and disposal of mineral materials with special conditions to limit surface use (Category 2).

2. <u>RECOMMENDATION AND RATIONALE</u>:
   24,190 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate approximately 24,190 acres as wilderness. This would include all of the original WSA (22,030 acres) plus a boundary modification including an area of 2,160 acres in the Upper East Fork of the Salt Creek drainage. A setback of 100 feet is recommended along approximately 0.75 of a mile of the WSA boundary in T. 32 S., R. 18 E., Sec. 12 to allow for maintenance of the existing road through Ruin Park. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the recommended area is in a natural condition and has outstanding opportunities for solitude and primitive

recreation. The study area is used by commercially guided nature study groups. No conflicts exist with minerals or other land uses. Designation would be complementary with wilderness management in the adjacent portion of Canyonlands National Park.

Approximately 13,710 acres of the recommended area are in the Butler Wash ACEC where restrictions on OHV use, mineral and energy exploration and development, mineral material disposal, and harvest of woodland products would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The entire recommended area (24,190 acres) retains its natural character due to its remote location and rugged terrain. Imprints cover less than 1 percent of the study area.

The WSA is more than 30 miles by unpaved road from the Dugout Ranch on Highway 211. The steep slopes at the heads of drainages in the southern portion of the WSA effectively prevent vehicle travel, and ledges and boulders in the midportion of the washes also make vehicular travel difficult.

In the northern part of the study area, 4-wheel drive vehicles are sometimes driven into the lower portions of the washes. A 2-mile vehicular way up Butler Wash reaches an open park in a side canyon (Starvation Pocket). Seasonal rains erase evidence of travel on the wash bottom, and the only evidence of vehicle travel is where wheel tracks leave the wash bottom for less than 0.25 of a mile.

Roads, abandoned drill holes, and reservoirs just outside the southern boundary are not visible from the interior of the WSA.

No surface-disturbing activities have occurred since the wilderness inventory. A helicopter seismograph proposal was canceled on January 26, 1984, before any on-the-ground activities occurred. This proposal was determined to be nonimpairing in the final Environmental Assessment.

B. Solitude

The entire recommended area (24,190 acres) provides outstanding opportunities for solitude.

The topography of the unit contributes to the opportunities for solitude. The Butler Wash WSA is contiguous with Canyonlands National Park on the north and the east, and the remote nature of the maze of parks in the Needles District and the canyons of Salt Creek is shared by the Butler Wash WSA. The Salt Creek Canyons in the southeastern part of the WSA and the Needles in the east and northeast provide excellent screening and a sense of isolation.

Off-site intrusions affecting solitude include road cuts on high points east of House Park and an old road cut around a butte on the unit's southern boundary. Evidence of other human activities south of the WSA are well screened from the interior of Butler Wash with steep buttes between them and the lower parts of the WSA.

C. Primitive and Unconfined Recreation

The opportunities for dispersed, undeveloped recreation within this unit are excellent. All 24,190 acres of the recommended area meet the outstanding primitive and unconfined recreation criteria.

Natural parks ringed by colorful sandstone spires and knobs, interesting rock forms and colors, and Indian ruins and rock art all provide focal points of interest to the dayhiker or backpacker. Hiking is easy in the wash bottoms and climbing to high points offers spectacular views over the unique redrock coun-

tryside. The sandstone in the unit provides challenging terrain and numerous opportunities to climb and explore. Erosion of parallel fractures in the rocks has created many narrow passageways that may draw the adventurous. Opportunities include photography, drawing, and sightseeing for botanical, zoological, or geological features.

D. Special Features

Approximately 47 percent (11,369 acres) of the study area are rated as outstanding for scenic quality. The scenic value of the unit is high, especially in the north-east and southeast. In the northeast, the Needles country becomes prominent. Red-and-buff sandstone spires, knobs, and buttes contrast with the green vegetation and blue sky. In the southeast, the heads of Salt Creek (most of which is in Canyonlands National Park) cut a myriad of shapes in the colorful sandstone.

The study area contains 13 recorded archaeological sites. There is a potential for 860 sites in the study area. These cultural resources enhance other wilderness values by lending a sense of timelessness to the area in which human use of the land seems short in comparison to the natural forces that shaped it. Evidence of early century cowboy use exists within the unit and adds to an understanding of the historical use of the land. One short brush fence exists in Butler Wash itself and evidence of an old horse or stock trail exists at the head of Butler Canyon leading from Beef Basin.

Cougars, which are often associated with wilderness, are found in the WSA. Peregrine falcon, an endangered species, may also occur in the WSA. Seven other animal species and two plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Colorado Plateau Province/Ecoregion.

All of the PNV in the recommended area is juniper-pinyon woodland (24,190 acres). The PNV in the recommended area is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,119,815
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,682,008

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Butler Wash WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 117 areas comprising 6,988,052 acres in Utah, Arizona, and Colorado, the adjacent states nearest the WSA.

A Butler Wash Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. About 12 miles south of the WSA is the 45,000-acre Dark Canyon Wilderness, to the east is the 41,189-acre Lizard Head Wilderness and to the west-southwest is the 25,751-acre Box-Death Hollow Wilderness. All of these wilderness areas are administered by the U.S. Forest Service (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The study area could be managed as wilderness. There are no oil or gas leases in the recommended area. There are no mining claims, and no known deposits of locatable minerals. The study area has little or no potential for potash.

Livestock grazing would continue as currently authorized but would not significantly reduce wilderness values. Control of off-highway vehicles (OHVs) is not anticipated to be a problem, mainly because of the rugged terrain in the WSA. There are four State-owned sections (2,560 acres) in the area recommended for designation and three State-owned sections adjacent to the west, east, and south boundaries of the WSA. If developments occur on these sections, activities and related access would reduce the quality of wilderness values, however, the potential for development is low.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Butler Wash WSA (USGS Bulletin 1754-A, Charles G. Patterson, et al., 1989). The report indicates that inferred subeconomic resources of sandstone and sand and gravel exist but because of their abundance throughout the region, their distance from current markets, and their lack of unique properties, these materials have no current likelihood of development. The potential for undiscovered resources of uranium and byproducts vanadium and copper and all other metals is low. There resource potential for undiscovered oil and gas is low to moderate. The resource potential for undiscovered placer gold and silver is low. The resource potential for undiscovered potash and halite (rock salt) is low. The resource potential for undiscovered geothermal energy, coal, and metals other than uranium, vanadium and copper is also low. The resource potential for a rare earth mineral (braitschite) that is present elsewhere in the region is unknown.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on wilderness values which is considered to be the only pertinent resource that would be significantly affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

BUTLER WASH WILDERNESS STUDY AREA

During formal public review of the Draft EIS, a total of 67 inputs specifically addressing this WSA were received from 1,025 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or testimony by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 52 commenters supported wilderness designation for part or all of the WSA, while 969 commenters were opposed. Four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness noted that designation would complement wilderness proposed in Canyonlands National Park. They also commented on the primitive recreation opportunities and special features in the WSA. The majority of those commenting were from other states. Of particular concern was the need to protect wilderness values.

Those opposing wilderness commented that there is no need for more wilderness; that the WSA could be protected without wilderness designation, which would harm State and local economies; and that wilderness designation would restrict public access to the area. Almost all of those opposing wilderness designation were from rural Utah.

Three Federal agencies, the USBM, the National Park Service (NPS), and the Environmental Protection Agency (EPA) commented on the Draft EIS for this WSA. The NPS favored wilderness designation for Butler Wash WSA; supported the addition of Upper East Fork and Salt Creek to the WSA; and commented that BLM's projected increase in visitor use was too high. The USBM expressed no opinion on wilderness designation for the WSA but commented that BLM underrated the petroleum potential of the WSA. The EPA did not take a position regarding designation of the WSA. The agency commented that several WSAs near Canyonlands National Park, including Butler Wash, should be under similar management or grouped together to form a larger geographical unit, in order to improve upon integrated multiple resource planning.

No comment letters were received on the Final EIS.

There are four State sections (2,560 acres) in the study area. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation for this area. The State commented that Butler Wash WSA has high wilderness values, which would complement similar values in Canyonlands National Park, and low mineral and energy conflicts. Concerns were expressed about potential impacts to management of critical deer winter range and livestock and the development of groundwater in the deep bedrock aquifer. Additionally, the State commented that, although oil and gas potential may be low, an undiscovered potential for tar sand deposits in the area may exist. The State also clarified that acquisition of state sections adjacent to the WSA were likely because these lands were identified for exchange.

The Butler Wash study area is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Butler WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan. The Commission also pointed out that State in-holdings in and along the boundary of the WSA would conflict with wilderness management and that the WSA is geologically and ecologically identical to other areas already protected in the GCNRA, National Parks, National Monuments, and FS wilderness within the Colorado Plateau and in San Juan County.

BUTLER WASH WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (24,190 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the WSA. It would enhance and complement the National Park Service proposal for wilderness designation and management of contiguous NPS lands.	Wilderness values would not be protected by wilderness designation. No disturbance that would affect wilderness values would be expected in the foreseeable future. Vehicular use of 2 miles of existing way would continue to occasionally detract from opportunities for solitude and primitive recreation in the WSA. This alternative would not complement or enhance the NPS proposal for wilderness designation and management of contiguous NPS lands.

BUTLER WASH WILDERNESS STUDY AREA

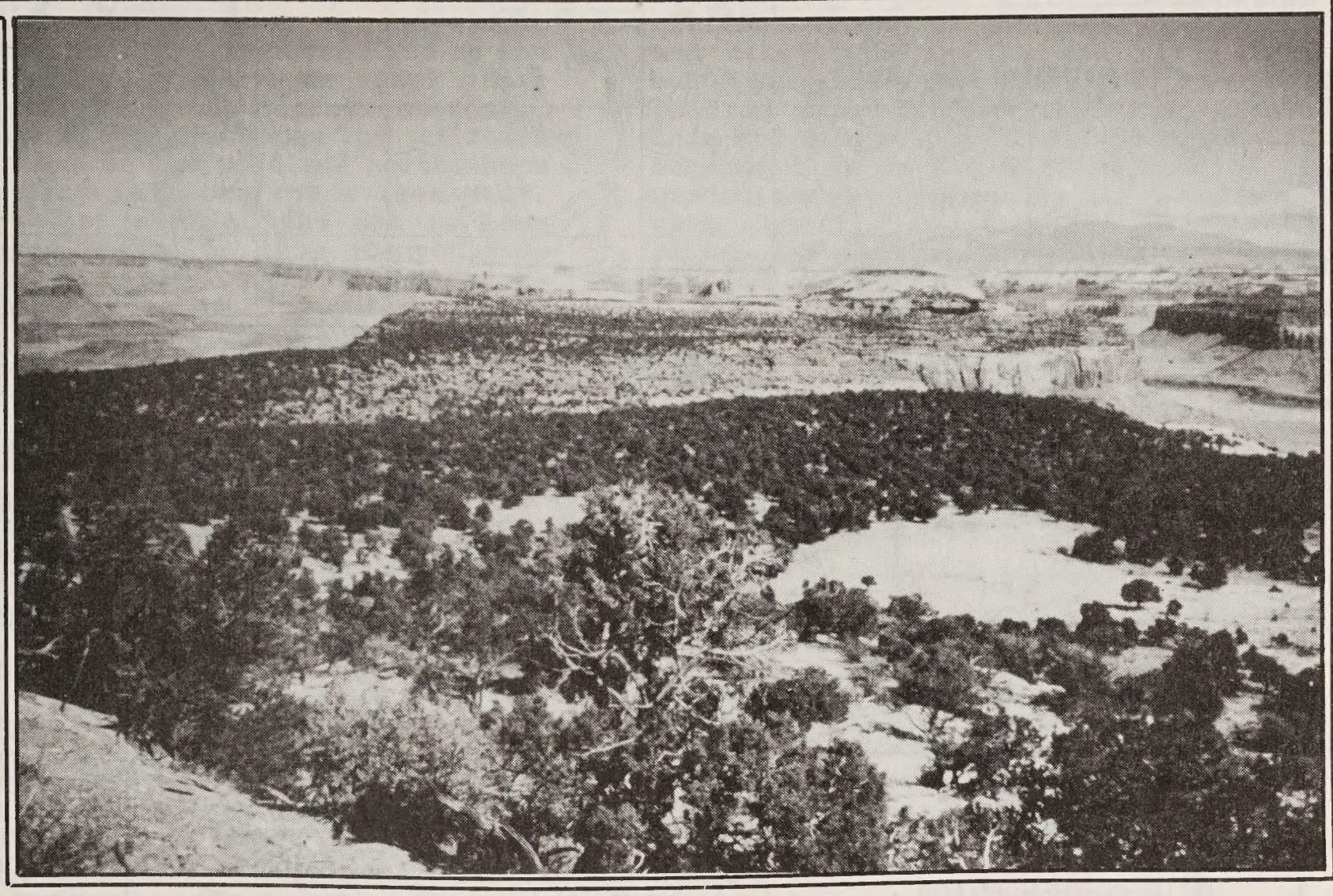
Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 31 S., R. 18 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 31 S., R. 18 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 32 S., R. 19 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 32 S., R. 20 E., Sec. 32[b]	640.00		State	State	No	Exchange		$2,000

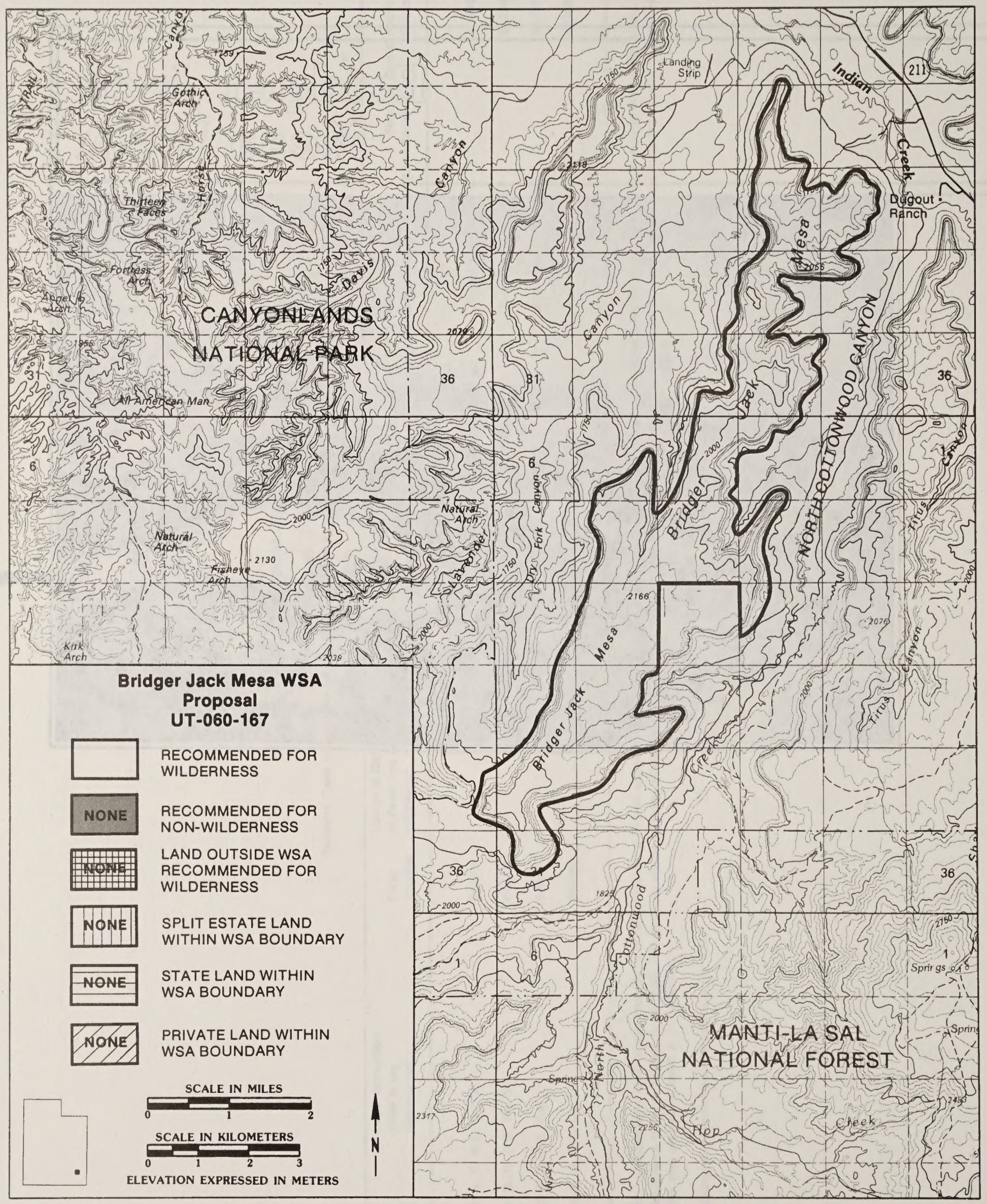
[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

[b] Located in recommended area outside of the WSA.

Bridger Jack Mesa WSA



BRIDGER JACK MESA WSA



October 1991

BRIDGER JACK MESA STUDY AREA

1. THE STUDY AREA: 5,290 acres

The Bridger Jack Mesa Wilderness Study Area (WSA) (UT-060-167) is in north-central San Juan County, about 18 miles northwest of Monticello, Utah (population 1,929). The study area is an elongated unit about 10 miles long from north to south and a little more than 2 miles from east to west at the widest point. The boundary is determined by the configuration of Bridger Jack Mesa except for the south-central boundary, which is along the edge of a State section, and on the west and north where the boundary is along roads (see Map). The southwest edge of the WSA is less than a 0.25 mile from Canyonlands National Park (see Map). The WSA contains 5,290 acres of public land administered by the Bureau of Land Management (BLM).

There are no private, State or split-estate lands inheld in the WSA (see Table 1).

The WSA is in the Canyonlands section of the Colorado Plateau Physiographic Province. Bridger Jack Mesa is a nearly north-south trending narrow tableland bounded by spectacular orange-red cliffs. The mesa slopes gently northward and elevations in the WSA range from 6,000 to 6,200 feet. The top of the mesa is from about 500 to 1,000 feet higher than the surrounding land. No perennial streams flow in the WSA. Vegetation is predominantly pinyon-juniper woodland, with small, interspersed sagebrush parks. The climate is arid to semiarid, with hot summers and cold winters.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WILDERNESS STUDY AREA	ACRES
BLM (surface and subsurface)	5,290
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	5,290
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	5,290
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	5,290
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

BRIDGER JACK MESA WILDERNESS STUDY AREA

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes all of the Bridger Jack Mesa WSA in the Bridger Jack Mesa Area of Critical Environmental Concern (ACEC) to protect semi-primitive recreation opportunities and to provide an area for comparative studies of the recovery of relict plant communities from the effects of grazing. Special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; stipulations to prevent surface occupancy of the mesa top on oil and gas leases (Category 3); closure to disposal of mineral materials; stipulations to preclude surface use of the mesa top insofar as possible on mining claims; exclusion from private or commercial use of woodland products, except for limited on-site collection of dead wood for campfires; exclusion from livestock grazing, including grazing by saddle stock and pack animals; exclusion from land treatments or other improvements, except for test plots and facilities necessary for study of the near relict plant communities; management to limit recreation use if vegetation resources are being damaged; exclusion from watershed control structures and wildlife habitat improvements; exclusion from surface disturbance by mechanized or motorized equipment, except helicopter access for scientific study and heliportable equipment, insofar is legally possible.

2. RECOMMENDATION AND RATIONALE:
   5,290 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate all of the area (5,290 acres) as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the WSA is in a natural state and has outstanding opportunities for solitude and primitive recreation. The main special feature of the WSA is the view from the mesa. BLM's analysis indicates that there is some potential for extraction of uranium from the WSA. Following wilderness designation, uranium related activities on valid mining claims existing at the time of designation would have only slight, short-term affects on wilderness values. BLM believes that the wilderness values of the area outweigh any potential losses of uranium production in the area.

Approximately 5,290 acres of the WSA are in the Bridger Jack Mesa ACEC where restrictions on OHV use, mineral and energy production, mineral material disposal, harvest of woodland products, and surface disturbance by mechanized and motorized vehicles would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

No significant conflicts exist with other resource uses. Livestock use was terminated in 1970, providing an area that is useful for comparative vegetation studies.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The WSA meets the naturalness criteria on all 5,290 acres.

The WSA is generally in an unaltered condition. The imprints of human activity are minor. Two trails constructed for livestock have deteriorated from

lack of maintenance. At least three reservoirs were constructed on the mesa. One of the reservoirs was on the State section adjacent to the WSA. The reservoirs have filled in, revegetated, and now blend into the environment. They are not noticeable from the air. A scoop and a plow used in the construction of the reservoirs were left on the mesa. Neither implement is noticeable unless it is searched out.

Mining claims have been staked and annual claim assessment work has been completed in portions of the WSA, but there are no major imprints within the WSA from this activity. No other surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

At the present time, with only limited visitor use, the entire Bridger Jack Mesa WSA provides outstanding opportunities for solitude.

The narrow elongated configuration of the mesa would tend to concentrate any increased recreational activities. In at least four areas, the mesa is less than a 0.5 mile wide, which limits opportunities for solitude. The rolling terrain and rock outcrops obscure sights and sounds of others in about 50 percent of the WSA. The pinyon-juniper woodland provides added visual screening and would help dissipate, but not eliminate, sights and sounds from other groups.

Outside sights and sounds are apparent. The paved road to Canyonlands National Park is easily seen from a portion of the rim of the mesa, and traffic can be heard from the two northern points of the mesa. The Dugout Ranch hay fields and roads in Lavender and North Cottonwood Canyons are also readily observed from the WSA.

Airplanes are frequently observed over the area. From Bridger Jack Mesa, a visitor has excellent views of the Six-Shooter Peaks, Lavender Mesa, Harts Point, and Canyonlands National Park.

Overall, the mesa top offers opportunities for seclusion, while the narrow necks and off-site intrusions limit opportunities to find seclusion in the northern half of the WSA.

C. Primitive and Unconfined Recreation

The entire 5,290 acres in the WSA meet the criterion for outstanding opportunities for primitive and unconfined recreation.

At the present time, Bridger Jack Mesa WSA provides opportunities for primitive recreational experiences due to its difficult access and limited visitor use. However, the narrow necks of the mesa would tend to concentrate user activities. The elongated mesa top itself confines all recreation to a narrow band (especially in the northern portion).

D. Special Features

The view from Bridger Jack Mesa is the major asset of the WSA, enhancing the recreational experience. The WSA may contain up to 125 archaeological sites.

Peregrine falcon and the spineless hedgehog cactus, (Echinocereus triglochidiatus var. inermis), which are listed as endangered, may occur in the WSA. Seven other animal species that are considered sensitive also may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (5,290 acres).

The PNV in the WSA is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any population centers.

C. Balancing the Geographic Distribution of Wilderness Area

The Bridger Jack Mesa WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,143,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A Bridger Jack Mesa Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres.

There are four designated wilderness areas within 100 miles of the WSA.

Approximately 15 miles south of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), and to the east, in Colorado, are the 16,505-acre Mt. Sneffels (FS), the 41,189-acre Lizard Head Wilderness areas (FS) and the 8,100-acre Mesa Verde Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA could be managed as wilderness to preserve the values now present in the area. The area is not grazed by livestock. There are no oil and gas leases in the WSA and new leases would not be issued. There are 68 mining claims covering about 1,360 acres of the WSA.

Because there is some potential for uranium in the WSA, BLM anticipates that a portion of these and future claims existing at the time of designation will be valid. However, disturbance related to these claims likely will be small (about 5 acres). There are no private, State, or split-estate land in-holdings in the WSA.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Bridger Jack Mesa WSA (USGS Bulletin 1754-A, Charles G. Patterson, et al., 1989).

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,138,715
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,700,908

Source: BLM File Data.

The report indicates that inferred subeconomic resources of sandstone and sand and gravel exist, but because of their abundance throughout the region, their distance from current markets, and their lack of unique properties, these materials have no current likelihood of development. The potential for undiscovered resources of uranium and byproducts vanadium and copper and all other metals is high in the northeastern portion of the WSA, but is low in the southern part of the WSA. The resource potential for undiscovered oil and gas is moderate. The resource potential for undiscovered placer gold and silver is low. The resource potential for undiscovered potash and halite (rock salt) is low. Rock layers that contain potash or halite elsewhere in the region do not extend beneath the WSA.

Hydrocarbon-bearing formations and structural traps exist at depth, but drilling in adjacent areas has not resulted in any production. The resource potential for undiscovered geothermal energy and coal is also low. No evidence or reports of geothermal energy in the region of the WSA have been found. No coal-bearing formations are present in the WSA.

A rare earth mineral (braitschite) that is present elsewhere in the region in a particular thin rock layer may or may not be present beneath the surface in the WSA. The resource potential for this mineral is unknown.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on wilderness values which is considered to be the only pertinent resource that would be significantly affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 81 inputs specifically addressing this WSA were received from 253 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 56 commenters supported wilderness designation for part or all of the WSA, while 191 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special values in the WSA. The majority of those commenting were from other states. Of particular concern was the need to protect wilderness values.

Those opposing wilderness were concerned that wilderness would preclude mineral-related activity and wood harvest, restrict public access, conflict with other land uses, and harm State and local economies. Almost all of those opposing wilderness designation were from rural Utah.

Three Federal agencies, the USBM, the NPS, and the Environmental Protection Agency (EPA), commented on the Draft EIS for this WSA.

The USBM commented that BlM underrated the petroleum potential of the WSA but the agency did not comment on designation or nondesignation of the WSA.

The NPS supported wilderness designation because of the proximity of the WSA to Canyonlands National Park. NPS stated that Bridger Jack Mesa offers outstanding opportunities for solitude, that it is an exceptional natural area representing pinyon-juniper woodland as documented by Van Pelt (1978), that roads are visible only from the edge of the

mesa, that noise from passing cars does not carry to the top of the mesa, and that it provides magnificent views of Lavender Canyon. NPS also stated that management of wilderness values would be simplified if T. 32 S., R. 21 E., Secs. 7, 18, and 19 and T. 32 S., R. 20 E., Secs. 24 were included in the WSA based upon their outstanding scenic quality and lack of development. NPS commented that the addition of these areas would form a continuous wilderness unit between Bridger Jack Mesa and Canyonlands National Park and help maintain wilderness resources in both areas.

The EPA did not comment on designation or nondesignation of the WSA. EPA recommended several steps to improve on integrated multiple resource management including a suggestion to consider grouping several WSAs (including Bridger Jack Mesa) adjacent to Canyonlands National Park under similar management or as a larger geographical unit.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the Bridger Jack Mesa WSA has moderate wilderness values and the lowest degree of conflict in the region and that there are no conflicts of major significance with the recommended 5,290-acre all wilderness alternative, but that a potential conflict exists with future habitat management for wildlife. The State also commented that the potential for uranium deposits under the WSA is greater than described in the Draft EIS.

The Bridger Jack Mesa WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Bridger Jack Mesa WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan and that the WSA is geologically and ecologically identical to other areas already protected in the GCNRA, National Parks, National Monuments, and FS wilderness within the Colorado Plateau and in San Juan County.

BRIDGER JACK MESA WSA

Table 3
Comparative Summary of Impacts by Alternative[a]

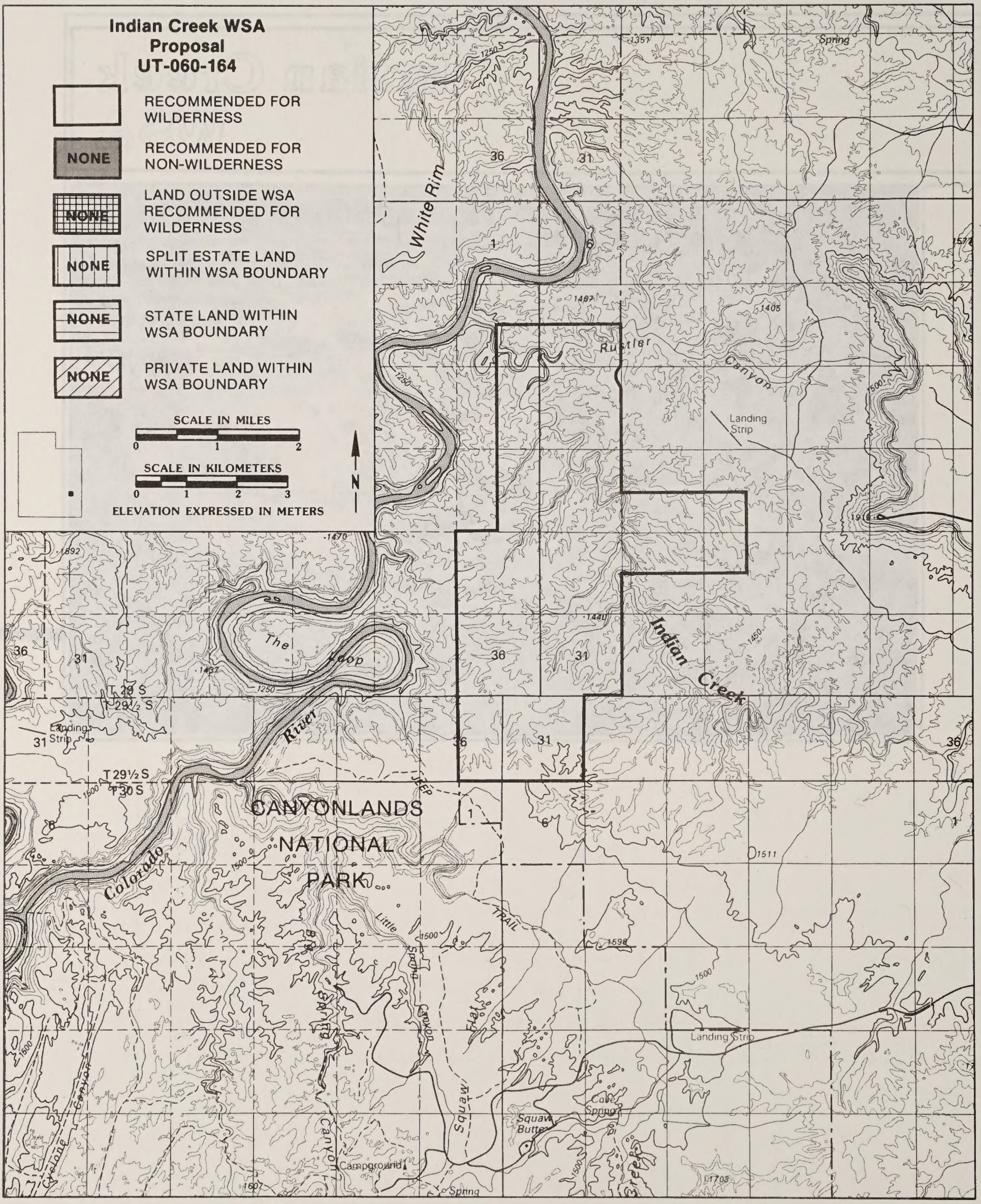
	Alternatives	
Issue Topic	Recommendation All Wilderness (5,290 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 5 acres and indirectly reduced in quality on up to an additional 106 acres due to exploration and development of valid mining claims. Special features would be preserved overall.	Wilderness value would not be protected by wilderness designation. Surface disturbance in the WSA would continue to be limited by closures to OHV use, surface disturbance by mechanized and motorized vehicles, and woodland harvest, as well as restrictions on surface disturbance associated with mineral and energy development. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 17 acres and opportunities for solitude and primitive recreation would be temporarily reduced in quality on up to an additional 529 acres of the WSA as a result of uranium exploration and development. Special features would not be significantly affected. Scenic view areas from the mesa would be disturbed by the development of mining access roads below the mesa top.

[a] The BLM San Juan RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

Indian Creek WSA



INDIAN CREEK WSA



October 1991

INDIAN CREEK WILDERNESS STUDY AREA

1. THE STUDY AREA: 6,870 acres

The Indian Creek Wilderness Study Area (WSA) (UT-060-164) is in San Juan County, about 35 miles northwest of Monticello, Utah (population 1,929). The study area is about 5.5 miles long from north to south and 1.5 to 3.5 miles wide from east to west. Canyonlands National Park is adjacent to the WSA on the north and west. The boundary of the WSA on the east and south is along section and subsection lines (see Map). The WSA contains 6,870 acres of public land administered by the Bureau of Land Management (BLM).

There are no private, State, or split-estate land in-holdings in the WSA (see Table 1). The WSA is in the Canyonlands Section of the Colorado Plateau Physiographic Province.

The study area consists of several northward-sloping canyons as much as 300 feet deep and narrow, twisting tributary canyons, cut through red rock. Four miles of perennial streams are within the WSA. Elevations range from 4,000 feet to 4,800 feet. About 75 percent (5,163 acres) of the WSA is bare rock. Sparse desert shrub covers the remainder of the study area. The climate is arid, with hot summers and cold winters.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation of this report, and a no wilderness (no action) alternative.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	6,870
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	6,870
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	6,870
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	6,870
In-holdings (State, private)	
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

INDIAN CREEK WILDERNESS STUDY AREA

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP).

The plan includes approximately 5,470 acres of the Indian Creek WSA was included within the Indian Creek Area of Critical Environmental Concern (ACEC) to maintain scenic quality.

The special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; closure to disposal of mineral materials; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; closed to off-highway vehicle (OHV) use; management to limit recreation use if scenic values are being damaged; management to meet Visual Resource Management (VRM) Class I objectives.

Approximately 1,400 acres of the WSA are outside of the Indian Creek ACEC. This area is classified as semi-primitive non-motorized (SPNM class) under the Recreation Opportunity Spectrum classification system, and is managed to provide a predominantly natural environment with limited evidence of human use and, where possible, to provide an environment with some opportunity for isolation. Special management requirements now in effect in SPNM class areas in Indian Creek WSA, where consistent with valid existing rights, include: mineral leasing, geophysical work and disposal of mineral materials with special conditions to limit surface use (Category 2); construction of range improvements and new land treatments so long as they blend with the natural character of the land; limitation of OHV use to designated roads and trails; construction of development projects that blend with the natural character of the landscape; private and commercial use of woodland products; management to meet VRM Class II objectives.

2. RECOMMENDATION AND RATIONALE:
6,870 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the area is in a natural state and has outstanding opportunities for solitude and primitive recreation. Potash and uranium or vanadium may be present in the WSA, but the likelihood of extraction is low. No conflicts with other land uses exist. Designation is complementary to proposed wilderness in adjacent Canyonlands National Park.

Approximately 5,470 acres of the WSA are in the Indian Creek ACEC where restrictions on OHV use, mineral and energy exploration and production, mineral material disposal, and woodland harvest would continue to be administratively applied if protection of wilderness characteristics is not a management objective.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Overall, imprints cover less than 1 percent of the WSA and are substantially unnoticeable in the area as a whole. The rugged slickrock landscape characterizes the naturalness of the area. The entire WSA (6,870 acres) meets the naturalness criteria for areas under wilderness review.

The WSA is in a natural condition partly due to its inaccessibility. Most human activity is associated with cattle grazing. A gap fence was erected a 0.25 mile above the mouth of Rustler Canyon to prevent cattle from drifting into Indian Creek. The fence is approximately 30

yards long from rim to rim of the canyon and has four strands of barbed wire and four steel posts. The fence is located in tamarisk and has an insignificant visual impact.

On the point to the west of the Rustler Canyon pour-off are the scattered remains of a missile launched from the Green River Missile Range in the 1960s. The larger portions of the missile were salvaged. A few sections of metal 2- to 3-feet long from 1- to 2-feet wide remain. Most of the scraps are less than 6 inches long. All of the pieces remaining have oxidized and now blend into the surrounding environment.

Annual assessment work of mining claims is evident along less than 1 mile of vehicular way near the northeast boundary of the WSA. The disturbance within the WSA is not significant.

No surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

The entire WSA (6,870 acres) meets the criteria for outstanding opportunities for solitude.

More than 10 miles of entrenched meandering canyons are within the WSA, including Indian Creek, Rustler Canyon, and their tributaries. The divides between canyons display several visual zones and enhance the opportunities for solitude. The vegetation of the WSA does not provide screening due to its limited extent.

Most of the unit is isolated from offsite intrusions and influences. Occasional off-highway vehicular (OHV) use northeast of the WSA is a nuisance, but it does not significantly affect opportunities for solitude.

C. Primitive and Unconfined Recreation

The WSA meets the criteria for primitive and unconfined recreation on all 6,870 acres. The steep, narrow canyon of Indian Creek provides outstanding opportunities for backpacking and associated activities.

D. Special Features

Twelve archaeological sites have been recorded in the WSA and the area may contain many more pristine cultural resources that have not been recorded.

Two pour-offs in Indian Creek near the western border of the WSA are picturesque when water is flowing in the intermittent drainage. The two pour-offs drop almost 150 feet.

Evidence of desert bighorn sheep, which is a wildlife species associated with wilderness, has been found within this WSA. Peregrine falcons, an endangered species may occur in the WSA. Six other animal species and one plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information. The entire WSA is rated outstanding for scenic quality.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely blackbrush (6,870 acres).

The PNV in the WSA is not represented in the NWPS nationally or in Utah, nor is it represented in other BLM study areas outside of Utah.

This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	223,194
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	223,194

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Provo-Orem, Utah	11	721,793	90	2,779,998

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of Provo-Orem, Utah. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of this population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The Indian Creek WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,143,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

An Indian Creek Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are five designated wilderness areas within 100 miles of the WSA. Approximately 22 miles south of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), and to the east, in Colorado, are the 16,505-acre Mt. Sneffels (FS), the 41,189-acre Lizard Head Wilderness (FS), the 8,100-acre Mesa Verde (National Park Service [NPS]) and the 11,180-acre Black Canyon of the Gunnison Wilderness (NPS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA could be managed as wilderness. No development is projected in the WSA prior to or following designation. There are no private, State, or split-estate lands in the WSA. There are no existing oil and gas leases. There is one pending oil and gas lease (839 acres) in the WSA; however, the potential for oil and gas development is low. There are no mining claims in the Indian Creek WSA. Several small deposits of uranium have been mined near the northern and eastern boundaries of the WSA; however, the potential for uranium deposits is only low to moderate in the WSA.

Domestic livestock grazing and maintenance of a fence for livestock control in Rustler Canyon would continue as authorized. This would not significantly detract from wilderness values in the area.

Increased ORV use in other parts of the Indian Creek drainage may infringe on the WSA and would be administratively difficult to control.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Indian Creek WSA (USGS Bulletin 1754-A, Charles G. Patterson, et al., 1989). The report indicated that inferred subeconomic resources of sandstone and sand and gravel exist, but because of their abundance throughout the region, their distance from current markets, and their lack of unique properties, these materials have no current likelihood of development. Inferred subeconomic resources of potash and halite (rock salt) are present beneath the WSA, but the likelihood of their development is low.

The resource potential for undiscovered geothermal energy, coal, and metals other than uranium, vanadium, and copper is also low. The resource potential for a rare earth mineral (braitschite) that is present elsewhere in the region is unknown.

No mining activity has occurred in the WSA, although some prospect pits are on the eastern boundary of the WSA.

The resource potential for undiscovered oil and gas is moderate. Hydrocarbon-bearing formations and structural traps exist at depth, but drilling in adjacent areas has not resulted in any production. The resource potential for undiscovered geothermal energy and coal is also low. No evidence or reports of geothermal energy in the region of the WSA have been found. No coal-bearing formations are present in the WSA.

The potential for undiscovered resources of uranium and byproducts, vanadium, and copper is high in the northeastern portion of the WSA. This assessment is based upon the presence of mineralized rock and a geologic environment favorable for uranium occurrence. The resource potential for undiscovered uranium, vanadium, and copper is low in the southern part of the WSA, based on the absence of any indications of mineralization. Overall, BLM has identified a low to moderate potential for uranium in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on wilderness values which is considered to be the only pertinent resource that would be significantly affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 160 inputs specifically addressing this WSA were received from 187 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 160 commenters supported wilderness designation for part or all of the WSA, while 21 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values, special features, and primitive recreation opportunities. The majority of those commenting were

from other states. Of particular concern was the need to protect wilderness values and complement proposed wilderness in adjacent Canyonlands National Park.

Those opposing wilderness were concerned that wilderness would preclude mineral-related activities and doubted that there is a need for more wilderness. Those opposing wilderness designation were almost equally from rural and urban Utah and from other states.

Three Federal agencies, the NPS, the USBM, and the Environmental Protection Agency (EPA), commented on the Draft EIS for the WSA. The NPS supported the all wilderness alternative because the area is contiguous with and complements proposed wilderness in Canyonlands National Park. The NPS commented that the Indian Creek unit should include Horse Thief Canyon and the upper portions of the Indian Creek drainage which meet the criteria for wilderness. NPS provided the legal descriptions of more than 10,000 additional acres and proposed that this acreage be added to the proposed wilderness area.

The USBM did not take a position regarding designation of the WSA, but commented that BLM underrated the oil and gas potential in the WSA.

The EPA did not take a position regarding designation of the WSA. The EPA commented that several WSAs near Canyonlands National Park, including Indian Creek WSA, should be under similar management or grouped together to form a larger geographical area in order to improve integrated multiple resource planning.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding designation of the WSA. The State commented that Indian Creek WSA has moderate wilderness values and moderate conflicts. The State added that there is some potential for potash, uranium/vanadium, and groundwater development in the WSA; however, the probability of large scale, economic deposits of uranium is low.

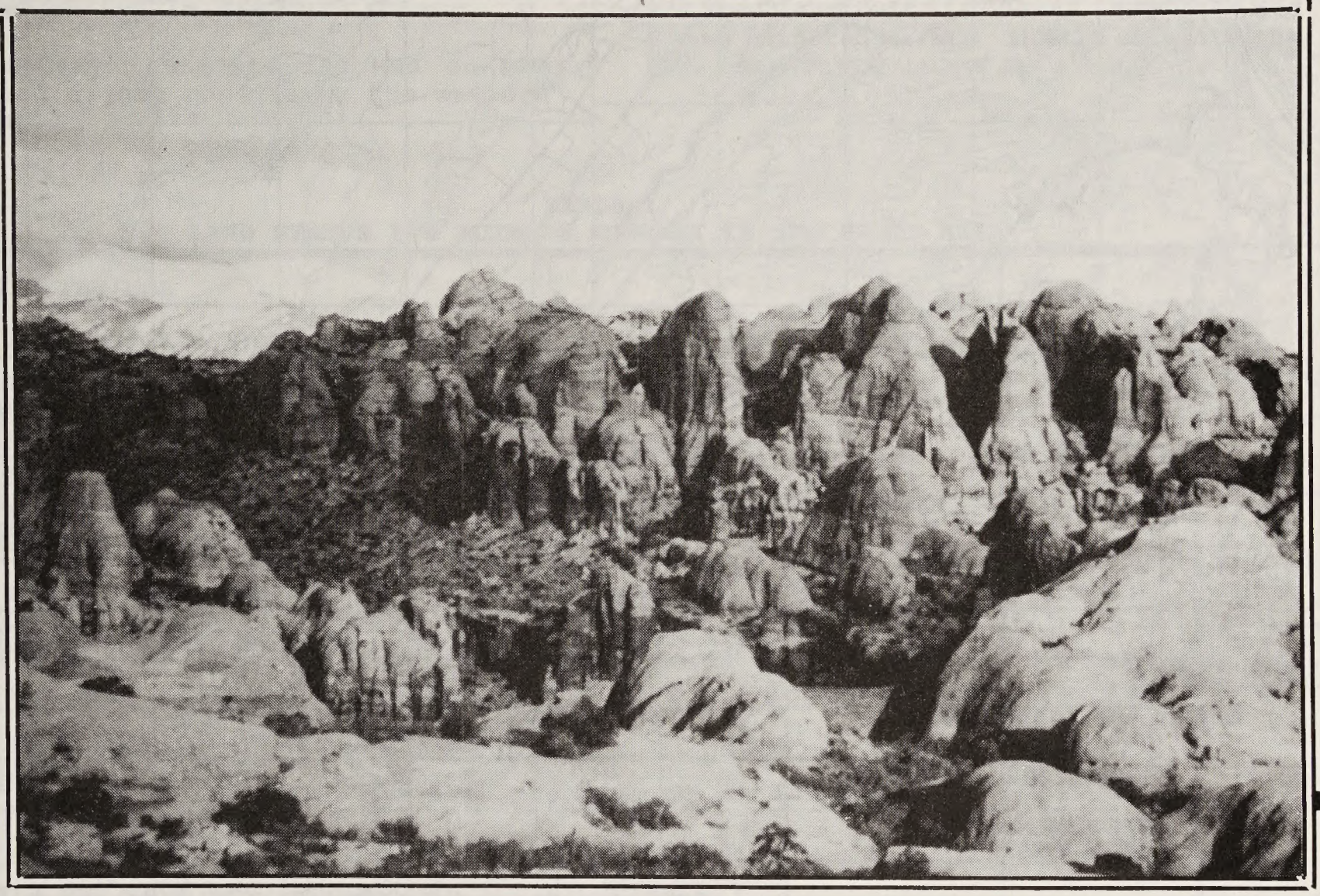
The Indian Creek WSA is in San Juan County. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land. The San Juan County Commission is opposed to wilderness designation for the Indian Creek WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS the Commission noted that designation of the WSA as wilderness would be in conflict with the County Master Plan. The Commission commented that the proximity of the WSA to the Lockhart road compromises the sense of isolation and solitude and that the WSA is geologically and ecologically identical to other areas already protected in the GCNRA, National Parks, National Monuments, and FS wilderness within the Colorado Plateau and in San Juan County.

INDIAN CREEK WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (6,870 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the WSA. This alternative would complement and enhance wilderness uses, values, and management of the contiguous National Park Service lands proposed for wilderness designation by the NPS.	Wilderness values would not be protected by wilderness designation. No disturbance is anticipated in the foreseeable future that would affect wilderness values. Vehicular use of less than 1 mile of way would occasionally detract from opportunities for solitude and primitive recreation. This alternative would not complement or enhance wilderness values, uses, and management of contiguous lands proposed for wilderness designation by the NPS.

Behind the Rocks WSA



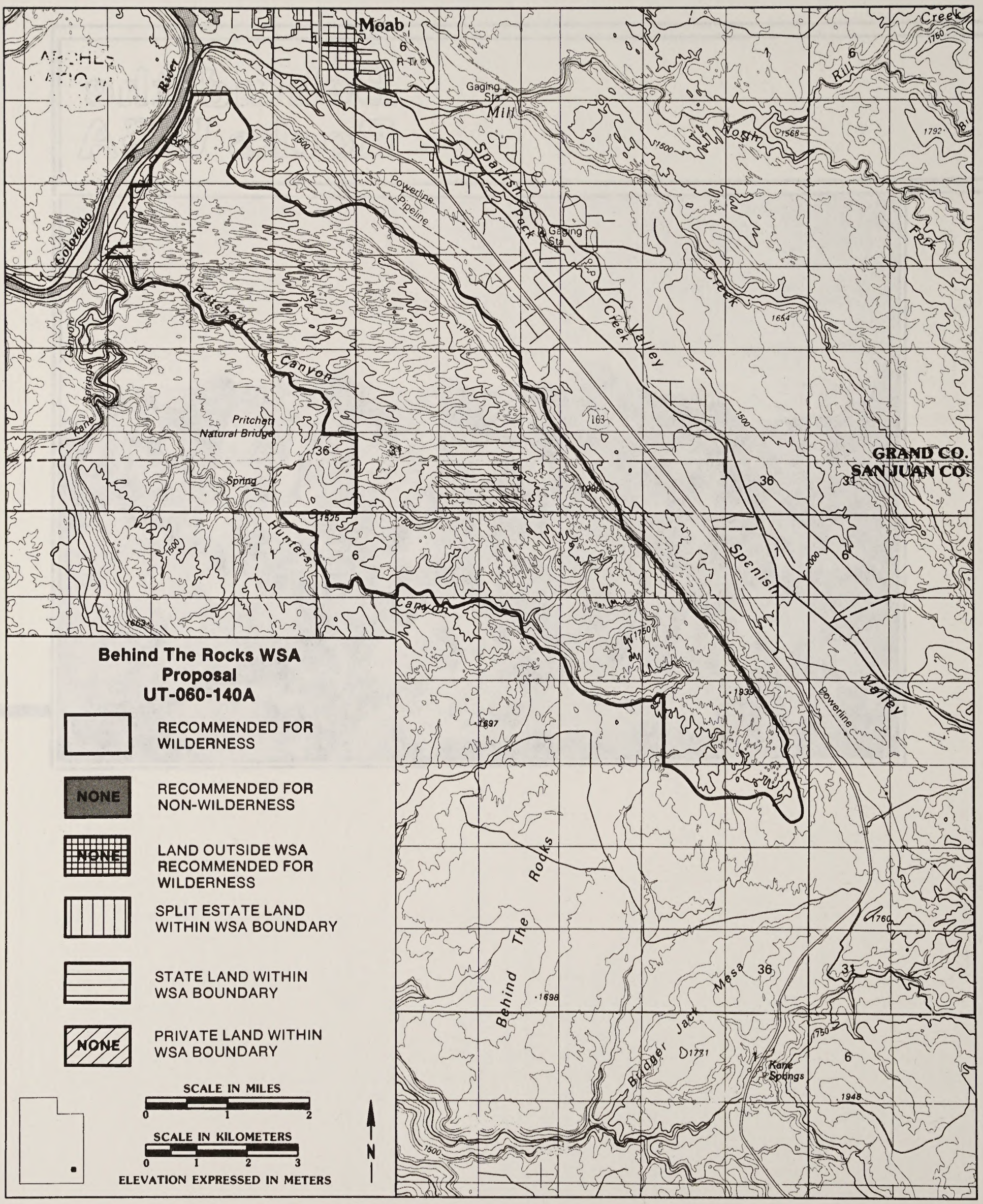
BEHIND THE ROCKS WSA

R. 21 E.

R. 22 E.

T. 26 S.

T. 27 S.



October 1991

BEHIND-THE-ROCKS WILDERNESS STUDY AREA

1. THE STUDY AREA: 12,635 acres

The Behind-The-Rocks Wilderness Study Area (WSA) (UT-060-140A) is in south-central Grand and north-central San Juan Counties, just southeast of the Colorado River and 1 mile southeast of Moab, Utah (population 5,333). Approximately 6,800 acres of the WSA are in Grand County and 5,835 acres are in San Juan County.

Hunters Canyon borders the WSA on the south and a jeep road forms the western boundary. Another jeep road and a powerline form the northern border, and the eastern boundary of the WSA is along a cliff and a section of State land (see Map).

The WSA contains 12,635 acres of public land administered by the Bureau of Land Management (BLM). One section of State land (640 acres) and 135 acres of split-estate land with Federal surface and State minerals, are inheld within the WSA (see Table 1).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	12,635
Split-Estate (BLM surface only)[b]	135
In-holdings (State, Private)	640
Total	13,410
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	12,635
BLM (outside the WSA)	0
Split-Estate (within the WSA)	135
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	12,635
In-holdings (State, private)	640
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

[b] In this report, split-estate lands are defined as only those lands with Federal surface and non-Federal subsurface (minerals). Lands that have Federal minerals but non-Federal surface are classified according to the owner of the surface.

Most of the eastern edge of the WSA is a sheer, northeast-facing red cliff known as the Moab Rim. The remainder of the study area consists of red rock fins, domes, and knobs, alternating with sandy stream washes. Elevations range from 4,100 feet in Pritchett Canyon, at the western edge of the WSA, to 6,530 feet above the cliff on the eastern side of the WSA. Altogether, about 50 percent (6,318 acres) of the WSA is bare rock. Pinyon pine and desert shrubs are the predominant vegetation in the remainder of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

2. RECOMMENDATION AND RATIONALE:
12,635 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate approximately 12,635 acres as wilderness. This would include all of the WSA except approximately 5 acres of canyon bottom located within Moonflower Canyon. (Acreage numbers for the recommended area have not been adjusted from the all wilderness alternative as all acreage figures are approximate.) The environmental consequences of this adjustment in the proposed action area are essentially the same as the all wilderness alternative. Recreational use is the key resource value of Moonflower Canyon. Moonflower Canyon is located along the northern boundary of the WSA.

Moonflower canyon is isolated from the remainder of the WSA by sheer cliffs. The canyon is readily accessible by vehicle from the adjacent Kane Creek Canyon Road and has been used as a camping area for many years by visitors to the Moab area. BLM recommends that the canyon bottom not be included within the designated area so that developed camping facilities can be provided for visitors. Designation of the entire area as wilderness is considered to be the environmentally preferred alternative as it would result in the least change from the natural environment over the long term. The alternative would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition of in-holdings and split-estate minerals.

All of the WSA is in a generally natural state and has outstanding opportunities for solitude and primitive recreation. Special features include striking scenery of sandstone fins, four arches, and archaeological values including a petroglyph that depicts a mastodon.

The WSA has favorable potential for oil and gas but the unique landscape and the wilderness values outweigh the mineral development potential.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All but 5 acres of the WSA meets the wilderness standard for naturalness.

The WSA remains generally natural. Most imprints are associated with vehicle use, but none is considered substantially noticeable within the unit as a whole. About 40 percent or 5,050 acres within an area of mostly slickrock fins are untouched.

Two short roads were constructed off the Pritchett Canyon boundary road for mineral exploration in the mid-1970s. The first road runs east for about a 0.5 mile in T. 26 S., R. 21 E., Secs. 23 and

24, ending at a small drill pad. The second road runs along the north side of a butte paralleling the boundary road for about 0.75 mile in T. 26 S., R. 21 E., Sec. 25, then rejoins the boundary road. The second road then runs about 1 mile east into the WSA in T. 26 S., R. 22 E., Sec. 30. A row of drill holes runs along this road. Although constructed, the roads have not been maintained and are considered as ways and were not used as boundaries for the WSA. They may have been constructed after FLPMA. In addition, a vehicular way extends about 0.75 of a mile up a side drainage of Hunters Canyon. The route is not heavily used and tracks are limited to the wash bottom and where they disappear after each major rainstorm.

A way extends about 1 mile into the WSA along the Moab Rim cliff on the southern tip of the WSA, leading to a natural arch. This drive is described in a local jeep tour guide book (Barnes, 1977). Because of the fin topography and slickrock, the way is not noticeable from a distance. A 0.3-mile-long way extends up Moonflower Canyon. The way was used as a route for a water pipeline constructed in 1984. The pipeline carries water from a spring development in the canyon to private land outside the WSA. Construction of the spring development and pipeline was authorized in 1976 (pre-FLPMA) and the right to develop was affirmed by the Interior Board of Land Appeals (IBLA). The pipeline route has been recontoured and rehabilitated. In all, there are approximately 3.55 miles of way within the WSA. Although these are the most substantial imprints in the WSA, they are felt to be substantially unnoticeable within the unit as a whole because of the topographic screening, minimal grading, and lack of vegetation on the surrounding bare rock.

In addition to vehicular ways, vehicle tracks can be found in the northern end of the WSA near the Moab Rim jeep trail (boundary road). These are from 4-wheel drive, 3-wheel drive, and 2-wheel drive vehicles. Because of the sandy soils, the tracks would revegetate quickly if use were discontinued. Tire tracks across slickrock are generally not noticeable, except from the immediate vicinity. In total, the area disturbed comprises about 300 acres.

Seismic lines were run by helicopter across the WSA in 1981, 1982, and 1983. All three lines generally paralleled the Moab Rim cliff. The first involved about 2.6 miles of the WSA (about 60 shot holes). The second involved two sections of the WSA, each about 1.5 miles long (about 15 shot holes each). The third was 2 miles long (16 shot holes). Each drill hole was located in sand pockets. All access was by helicopter. In some sections of the north end of the WSA, for about 1.5 miles, burn marks remain on the slickrock. A 69-kV powerline runs through the northwestern portion of the WSA for approximately 0.9 of a mile.

These imprints combined cover about 305 acres (less than 2 percent) of the WSA. With the exception of the 5 acres disturbed for the powerline, none are felt to impair the naturalness of the WSA as a whole and will become less noticeable with the passage of time due to natural weathering processes.

B. Solitude

Outside influences are noticeable, but most of the WSA (12,585 acres) provides opportunities that meet the outstanding criterion for lands under wilderness review. About 50 acres near the Kane Springs Canyon Road and the 69-kV powerline do not meet the standards of solitude. The massive sandstone fins provide exceptional screening potential. Where sights and sounds of outside activities do occur, the magnificent vistas dwarf their impact. The WSA provides for a dispersion of visitors throughout.

The WSA offers outstanding opportunities for solitude. Unusual topographic screening is created by the sandstone fins, and vertical isolation is created by the Moab Rim.

The size of the WSA neither enhances nor detracts from opportunities present. The long, narrow configuration might detract from opportunities, if not for the extreme vertical relief within and along the perimeter of the WSA.

Topographic screening contributes most toward outstanding opportunities for solitude. The tall, narrow fins form interconnecting passageways that provide

a myriad of potential travel routes and block both sights and sounds of nearby groups. The vertical separation afforded by the Moab Rim, the cliff above the Colorado River, and to a lesser extent by Pritchett Canyon, enhance the remoteness of the WSA and the feeling of isolation. Vegetation screening within the WSA is minimal.

Sights and sounds of human activities are present from many places within the WSA. Most notably, the Town of Moab and settlement in Spanish Valley are both visible and audible all along the Moab Rim, as is traffic along U.S. Highway 191. From the northern edge of the WSA, State Highway 279 (the Potash Road) on the north side of the river, the paved Kane Springs Canyon Road (known locally as the Egg Ranch Road) on the south side of the river, private homes and farmland are along the Kane Springs Canyon Road, and two large powerlines are all visible. A major utility corridor runs just outside the WSA at the base of the Moab Rim cliffline. It contains three transmission lines and two buried natural gas pipelines. The pipelines cut over the cliffline just south of the WSA. A maze of oil exploration seismograph lines, roads, and drill locations lie south of the WSA on the sand flats properly named Behind-The-Rocks; these are visible from the south edge of the WSA and from other vantage points. Occasionally, heavy ORV use of boundary roads could influence solitude within the WSA. More distant activities may be visible from portions of the WSA, particularly the Potash plant to the west and drilling activities to the north.

Regardless of the outside influences, it is easy for a visitor to find seclusion within the WSA due to the screening and alternate travel paths afforded by the sandstone fins. In these areas, sights and sounds of others within the unit can easily be avoided. In the open drainages in the central portions of the WSA it would be more difficult to find a secluded spot, but the sandstone ledges offer some opportunities.

C. Primitive and Unconfined Recreation

The primitive recreation opportunities on 12,585 acres within the WSA meet the outstanding criterion for lands under wilderness review. The extremely unusual fin topography enhances hiking and sightseeing opportunities to a degree not often equalled in the region. About 50 acres near the Kane Springs Canyon road and the 69-kV powerline do not meet the standard for primitive recreation.

The WSA offers outstanding opportunities for hiking, backpacking, and related activities. Rock scrambling and climbing are also possible. With its beautiful red sandstone fins, geologic and archaeologic features, and scenic vistas, the WSA is well suited for sightseeing and photography. The fins provide a myriad of potential hiking routes; the alcoves provide camping spots. Both the Indian Fortress and Otho Arch serve as destination points, adding to the interest of the area. Opportunities for hunting are not good because of the scarcity of big game. Although some horsepacking takes place along the eastern side, the interior of the WSA is too rugged for prime opportunities and, in places, impassable for horses.

D. Special Features

Scenery within the WSA is spectacular. The WSA is rated as outstanding for scenic quality. The geologic features and resulting landscape of the WSA are unique. Although four arches are known, the WSA has potential for other arches or geologic features not yet discovered. The Indian Fortress is unlike other Indian ruins in the vicinity; its purpose is still unknown. The WSA contains a mastodon petroglyph that may be significant in dating its parent culture. The possibility for paleontologic resources is present within the WSA. The WSA holds promise for other cultural sites yet undiscovered.

The WSA has migratory populations of cougar and desert bighorn sheep which are wildlife species associated with wilderness.

Peregrine falcon and black-footed ferret, listed as endangered species, may occur in the WSA. The Jones cycladenia, Cycladenia humilis var. jonesii, is a threatened plant species that may also occur within the WSA. Seven additional animal species and four other plant species that are considered sensitive

may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections in the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (12,635 acres). Juniper-pinyon woodland PNV is represented in the NWPS nationally and in Utah and other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	10	1,401,745	84	2,131,370
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,693,563

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,247,040
Provo-Orem, Utah	11	721,793	90	2,774,233

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Behind-The-Rocks WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,143,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

The Behind-The-Rocks Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. About 45 miles southwest of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the east, in Colorado are the 41,189-acre Lizard Head Wilderness (FS), and the 16,505-acre Mt. Sneffels Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA recommended for wilderness designation can be managed as wilderness to preserve the values now present in the area. Current uses such as livestock grazing would continue with little or no effect on wilderness values. Even though there are 890 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 3,300 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb only small areas (approximately 12 acres) following wilderness designation. The presence of one State section (640 acres) and 135 acres of split-estate land with State minerals in the wilderness could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. The in-held State sections are leased for minerals. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State lands could reduce wilderness values in small parts of the recommended wilderness.

Management of the 5 acres in Moonflower Canyon not recommended for wilderness would be difficult. The small size of the canyon, its proximity to the Kane Creek Road, its isolation from the rest of the WSA by ledges, and traditional use of the area for vehicle-supported camping would make it administratively difficult to prevent use of the area by vehicle and subsequent loss of wilderness values.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Behind-The-Rocks WSA (USGS Bulletin 1754-B, Charles G. Patterson, et al., 1988). The report indicates that the WSA has inferred subeconomic resources of potash and halite (rock salt) in the subsurface, and sandstone on the surface. The study area has high potential for undiscovered resources of oil and gas, low potential for undiscovered uranium, copper, vanadium, gold, silver, other metals, and geothermal energy, and unknown potential for the rare earth mineral, braitschite. There is no resource potential for potash or halite, beyond the inferred resources noted above, or for coal.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With implementation of BLM's recommended All Wilderness Alternative there would be no major economic affects. There would be a slight loss in oil and gas related jobs (10 jobs, 3 to 6 months

temporary and 2 jobs permanent) as compared to the No Action/No Wilderness Alternative. Increases in primitive recreation visitors could provide up to $65,700 annually to the local economy. There would also be a potential loss of up to $10,410 annually in Federal revenues from the 5,205 acres that could be leased without designation. In addition to these rental fees any potential royalties from lease production would be foregone.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 106 inputs specifically addressing this WSA were received from 117 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 85 commenters supported wilderness designation for part or all of the WSA, while 22 commenters were opposed. Ten commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the opportunities for primitive recreation and the special features of the WSA. The majority of those commenting in favor of wilderness were from other states. Of particular concern was the need to protect wilderness values.

Those opposing wilderness were concerned that wilderness would preclude mineral-related activities. Most of those opposing wilderness designation were from rural Utah.

One Federal Agency, the USBM, commented on the Draft EIS for this WSA. The USBM noted that the BLM's Final EIS should include the findings of the USGS and USBM minerals investigations and projected that those findings would be available in September 1988. Their findings have been incorporated into the Final EIS and study report.

No comment letters were received on the Final EIS.

There is one State section (640 acres) in this WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the Behind-The-Rocks WSA has both moderate wilderness values and conflicts as compared to other WSAs within the region.

The Behind-The-Rocks WSAs contains portions of Grand and San Juan Counties. The master plans for these Counties do not specifically address the WSA. The Grand County Master Plan generally emphasizes continuation of present uses and maximizing mineral development. The San Juan County Master Plan emphasizes multiple use of public lands and zones the WSA as open range and forest land.

The Grand and San Juan County commissions are opposed to wilderness designation and have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commissions stated that Behind-The-Rocks should not be managed as wilderness because in-held and adjacent State lands as will as 4-wheel drive recreation may compromise management. The Commissions also noted that designation of the area as wilderness would be contrary to county planning goals. According to the County Commissions, the WSA has a high potential for movie production that could be impeded by limitations on vehicle access if the area is designated wilderness.

BEHIND THE ROCKS WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation All Wilderness (12,635 Acres)	No Action/No Wilderness
	Alternatives	
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and oppor-tunities for solitude and primitive recreation would be directly lost on 14 acres and indirectly reduced in quality on up to an additional 379 acres. Special features would be preserved except Class A scenery could be reduced in quality on disturbed and surrounding areas.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. Due to uranium ex-ploration and oil and gas exploration and development in the fore-seeable future, naturalness and opportunities of solitude and prim-itive recreation would be directly lost on about 64 acres and indi-rectly reduced in quality on up to an additional 1,264 acres. The only special feature that would be significantly affected would be Class A scenery which would be reduced in quality in disturbed and surrounding areas in the northwestern and southern portions of the WSA.
Impacts on Vegetation	The vegetation types, including endangered and sensitive species, would be protected by this alternative because potential surface disturbance would be reduced to 14 acres or 0.1 percent of the WSA.	Vegetation types and threatened, endangered, or sensitive plant populations would not be significantly affected because the 64 acres of projected surface disturbance would affect only 0.5 percent of the vegetation in the WSA and mitigation would be required.
Impacts on Mineral and Energy Exploration and Production	Wilderness designation would preclude potential exploration and development opportunities for oil and gas resources projected to occur in the WSA. Production of these resources would be foregone. It would also limit potential exploration and development oppor-tunities for locatable minerals to those under mining claim at the time of designation. Significant locatable mineral production would not be foregone because the probability of development is low even if the WSA is not designated wilderness.	Implementation of this alternative would not adversely affect min-erals and energy resource exploration and production beyond those restrictions already in place because mineral leasing of mining claims and development could continue as at present.
Impacts on Wildlife Habitat and Populations	Wildlife including endangered and special status species would be protected by this alternative. Only 0.1 percent of the habitat in the WSA would be disturbed.	Wildlife habitat and populations including threatened, endangered or other special status animal species would not be significantly affected because only 0.5 percent of the habitat in the WSA would be disturbed and mitigation would be required.

BEHIND THE ROCKS WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (12,635 Acres)	No Action/No Wilderness
Impacts on Visual Resources	Visual resources would be protected throughout the WSA. Visual quality would be reduced on about 14 acres that would be directly disturbed as well as on surrounding acres. The disturbance would be from mineral exploration activities and the development of access.	Visual resources would be protected by existing management restrictions. However, visual quality would be reduced on 64 acres that would be disturbed as well as on surrounding areas. The disturbance would be from mineral exploration activities and the development of acres.
Impacts on Cultural Resources	Cultural resources including 5 known sites would receive additional protection with this alternative. Management of cultural resources may be restricted in order to protect other wilderness values.	Inadvertent loss or damage to cultural resources including 5 known sites may occur due to mineral exploration, surface development and/or development of access to State lands. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resource management would continue without regard to wilderness management.
Impacts on Recreation	The quality of primitive recreational use would be preserved overall in the WSA. However, opportunities for primitive recre-ational use would be reduced in quality on 14 directly disturbed acres as well as in areas adjacent to the disturbance. Use of vehicles would be precluded in the WSA but would not decline in the region. Primitive recreational use would increase at rates similar to those for the No Action/No Wilderness Alternative.	Opportunities for primitive recreational use would be reduced in quality on 64 directly disturbed acres of the WSA surrounding the disturbed area as well as in areas adjacent to the disturbance. Off-road vehicle use would be precluded. Primitive recreational use would increase.
Impacts on Local Economic Conditions	There would be no major economic affects from wilderness designation. There would be a slight loss in oil and gas related jobs (10 jobs, 3 to 6 months temporary and 2 jobs permanent) from the No Action/No Wilderness Alternative. Increases in primitive recreation visitors could provide up to $65,700 annually to the local economy.	Overall, economic conditions would not be significantly affected. Mineral activities would increase local employment by only 10 temporary and 2 permanent jobs. Recreation-related expenditures could contribute up to $65,700 annually to the local economy.

BEHIND THE ROCKS WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

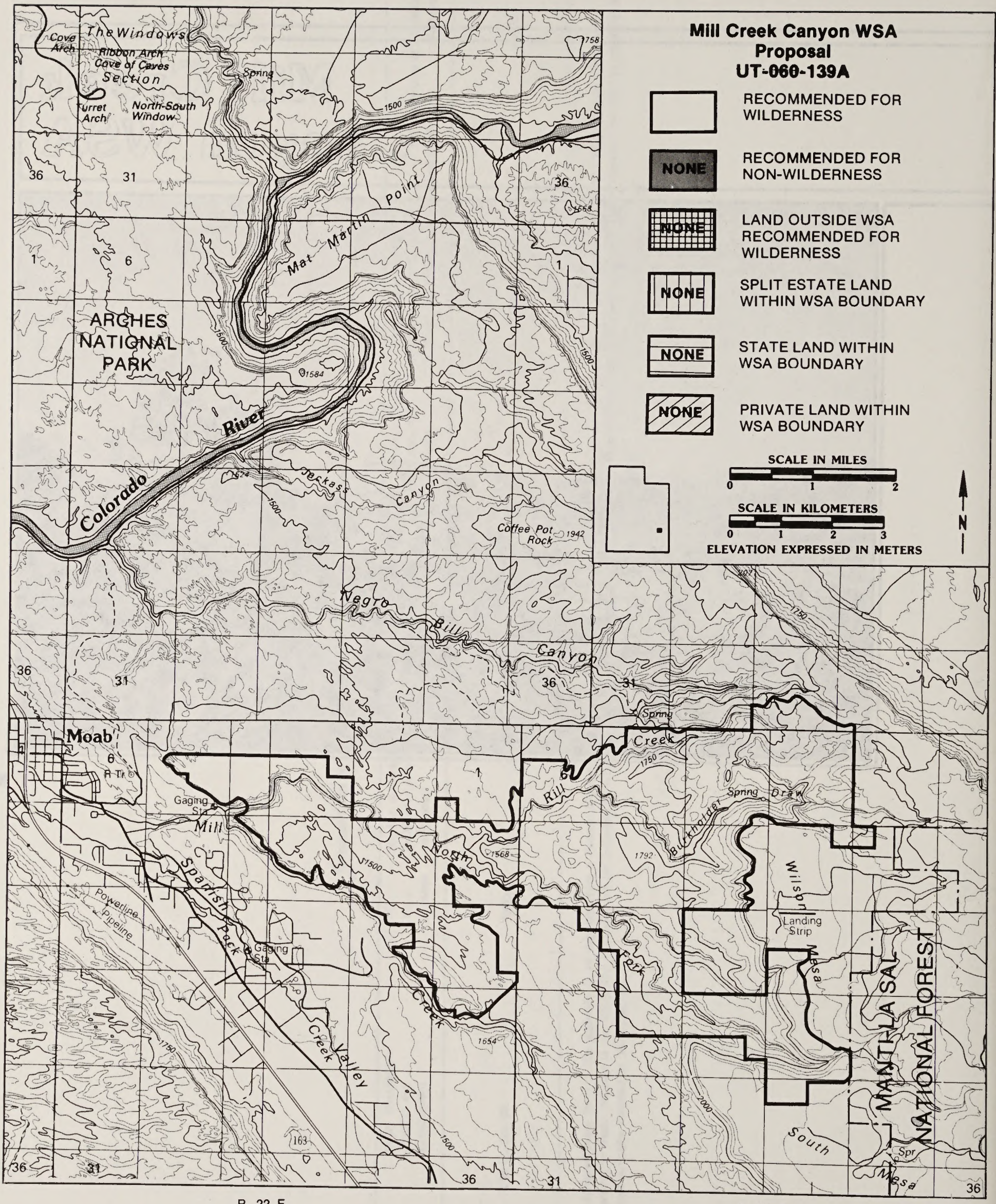
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 26 S., R. 22 E., Sec. 32	640.00		State	State	No	Exchange	$2,000	

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Mill Creek Canyon WSA



MILL CREEK CANYON WSA



October 1991

MILL CREEK CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 9,780 acres

The Mill Creek Canyon Wilderness Study Area (WSA) (UT-060-139A) is in Grand County, about 1 mile east of Moab, Utah (population 5,333). The WSA is an irregularly shaped unit that extends about 4 miles from north to south and 7 miles from east to west. The study area is west of and adjacent to the Moab Ranger District of the Manti-La Sal National Forest. State and private lands are adjacent to the WSA on the east, north, and south. The remaining boundaries are along cliffs and mesa slopes (see Map). The WSA contains 9,780 acres of public land administered by the Bureau of Land Management (BLM). There are no private, State, or split-estate land in-holdings in the WSA (see Table 1).

Deep canyons and escarpments characterize the WSA. Elevations range from about 4,400 feet on Mill Creek at the western end of the WSA, to 7,000 feet on Wilson Mesa at the eastern end of the WSA. Blackbrush is the predominant type of vegetation, dominant in some parts of the study area and mixed with pinyon-juniper in other parts of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	9,780
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	9,780
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	9,780
BLM (outside the WSA)	0
Split-Estate within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	9,780
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

2. RECOMMENDATION AND RATIONALE:
9,780 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the WSA is essentially natural in condition. Almost one-third of the WSA has outstanding opportunities for solitude and primitive recreation. Oil and gas, potash, and uranium and vanadium resources may exist in the WSA, but the potential for their development is considered to be low. The value of the area for wilderness purposes outweighs the value of potential mineral uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All 9,780 acres of the WSA remain essentially natural in character.

A trail was once bladed into the North Fork of Mill Creek but it now fades out half way to the bottom of the drainage and becomes a cattle trail. Conventional seismic exploration activity was conducted in the southwestern portion of the WSA between Mill Creek (outside of the WSA) and the North Fork of Mill Creek. The seismic lines totaled 3 miles in length. Small scale post-FLPMA placer gold exploration occurred near Wilson Mesa. Overall, there are 4 miles of vehicular ways in the WSA. All of these intrusions are substantially unnoticeable.

Since establishment of the WSA, a number of placer gold explorations and helicopter seismic activities have occurred.

The placer gold explorations were as follows:

1. Three exploratory trenches just inside the eastern edge of the WSA disturbed approximately 1 acre. Reclamation was completed in 1986.

2. Seven hand-dug holes approximately 3 feet deep, and about 65 three feet deep backhoe holes to determine the depth of the gold ore body. Reclamation was completed in 1986.

3. One trench (1 ft.by 3 ft. by 100 ft.) and one pit (6 ft. by 6 ft. by 9 ft.), resulting in approximately 2 acres of disturbance. Reclamation was to be completed in 1990.

4. An in-stream placer gold exploration was conducted in 1984. The disturbance was minimal because the claimant used a hand-held vacuum dredge in the potholes in the stream. The plan of operations was determined to be nonimpairing. No reclamation was required and the equipment was removed.

5. One unauthorized placer gold activity occurred within the WSA, resulting in one hole on an old seismic line at the eastern end of the WSA. The disturbance was less than 1 acre and reclamation has been completed.

The helicopter seismic operations, conducted in 1983 and 1984, were determined to be nonimpairing and all necessary reclamation has been completed.

Upon final reclamation of the placer gold exploration activities, the entire WSA will meet the Wilderness Act criteria for naturalness.

B. Solitude

Overall, a 2,800-acre portion of the WSA meets the outstanding criterion for solitude. The balance of the WSA, 6,980 acres, does not meet the outstanding criterion for areas under wilderness review.

The WSA offers outstanding opportunities for solitude within portions of the unit due to the variety of the topography. The area does not give the visitor a feeling of vastness. The configuration

of the WSA is of considerable importance in assuring protection of the wilderness values. The WSA is basically shaped like an hourglass, the center being constricted down to about a 0.5 mile in width. The main branch of Mill Creek is not included in the WSA but instead is adjacent to the western boundary of the WSA. A constriction is also found along the west side where the unit narrows down to about a 0.5 mile. Private land on Wilson Mesa intrudes into the eastern portion of the area creating two legs, one encompassing the North Fork of Mill Creek and one encompassing Burkholder Draw to the north. The Mill Creek constriction narrows to a 0.5 mile for a distance of 0.75 of a mile. The narrow constrictions inhibit the ability to protect existing opportunities for solitude from potential uses outside the WSA.

Sheer canyon walls provide vertical separation and screening. The depth and winding nature of the canyon enhances topographic screening. In the eastern half of the canyon, the cliff walls become less sheer, with several side canyons branching off the main drainage. Vertical separation is not so pronounced here. The winding nature of the eastern half of the canyon also provides some screening. The side canyons that branch off the main drainage provide additional topographic screening. Topographic screening is also provided by sandstone fins in the western part of the unit near the canyon mouth. The upper elevations of the unit consist primarily of wind-blown sand and sandstone formations. Some topographic screening is provided by this uneven terrain. Narrowness of the canyon can detract from the solitude when many people are in the area by limiting their opportunity to avoid each other.

Significant vegetation screening is provided by riparian vegetation along Mill Creek Canyon and by moderately dense pinyon-juniper growth in the eastern portion of the WSA. Vegetation screening diminishes in the canyon bottom in the upper portion of Mill Creek, and is absent in slickrock and low brush and grass-covered areas.

The area of outstanding solitude is principally associated with the North Fork of Mill Creek in the western half of the WSA. This area, combined with the nearby redrock fins, comprises about 2,800 acres of outstanding solitude opportunities. Solitude is limited in the central, southwestern and southeastern portions of the unit where the WSA is constricted to areas of a 0.5 mile.

Sights and sounds of human activity outside the WSA are present from some locations within the WSA. The western edge of the WSA borders Mill Creek and, in places, comes close to housing developments in Moab in the vicinity of Kayenta Heights and the Highlands. Agricultural activities exist on private land adjacent to the WSA on Wilson Mesa. Vehicle noise from these sources can be heard within portions of the WSA. The Sand Flats Road provides a portion of the northern boundary of the WSA. Traffic on this road is visible and can be heard from within the WSA. Distant sounds of trucks on U.S. Highway 191 can be heard at high points within the area.

A visitor has no problem finding a secluded spot in the North Fork of Mill Creek and in Burkholder Draw. However, seclusion in the central, southwestern, and southeastern portions of the WSA is difficult to find.

C. Primitive and Unconfined Recreation

Overall, primitive recreation opportunities meet the standard for outstanding on approximately 2,800 acres (30 percent of the WSA) in the canyon and fins areas, and do not meet the standard in the remaining 70 percent of the area (6,980 acres).

Portions of the canyon provide outstanding opportunities for hiking, camping, backpacking, and nature study. Sandstone fins near the mouth of the canyon provide excellent photographic opportunities. The WSA is of limited value for hunting and fishing.

D. Special Features

Sandstone fins near the mouth of Mill Creek are scenic geologic features.

Peregrine falcons and bald eagles, listed as endangered species, and six

other animal species that are considered sensitive may occur within the WSA.

The Jones cycladenia, Cylcadenia humilis var. jonesii, a threatened plant species, and one other plant species that is considered sensitive may also occur within the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

The WSA has approximately 20 miles of perennial streams. Mill Creek is one of the few side drainages to the Colorado River in Utah that contains a perennial stream with several small waterfalls. This is of particular significance when considering its proximity to the community of Moab, making it easily available for public use.

Portions of the WSA contain outstanding examples of prehistoric Indian rock art.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (9,780 acres), which is well-represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (Five Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mill Creek Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,134,225
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,696,418

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,249,895
Provo-Orem, Utah	11	721,793	90	2,777,088

Source: BLM File Data.

As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah and Arizona and Colorado the adjacent states nearest the WSA.

A Mill Creek Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totalling 70,751 acres. There are four designated wilderness areas within 100 miles of the WSA. About 50 miles southwest of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), to the southeast, in Colorado are the 41,189-acre Lizard Head Wilderness (FS) and the 16,505-acre Mount Sneffels Wilderness (FS), and to the east of the WSA, also in Colorado, is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The Mill Creek Canyon WSA can be managed as wilderness to preserve the values now present in the area. Current uses such as livestock grazing and maintenance of a 0.25 mile of fence would continue with little or no effect on wilderness values. Even though there are 320 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 2,080 acres of mining claims in the WSA but because of low resource potentials, development is not expected following wilderness designation. There are no private or State inholdings or other valid rights in the WSA that would significantly affect wilderness values.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Mill Creek Canyon WSA (USGS Bulletin 1745, Michael F. Diggles, et al., N.D.). The report indicates that field work was conducted in 1988. No mineral resources were identified in the WSA. Placer gold is present in the eastern part of the study area but not in sufficient quantity to be considered a resource. Eolian sand and sandstone occur in the study area, but it is unlikely that these will be developed. No geothermal resources are known to exist in the study area.

The entire study area has a high potential for undiscovered mineral resources of potash and halite (rock salt), and areas underlain by the Navajo Sandstone also have high potential for resources of flagstone. The top of Wilson Mesa also has high resource potential for small deposits of placer gold. The entire WSA has moderate potential for resources of uranium, thorium, copper, vanadium, oil and gas, and carbon dioxide and has low potential for resources of helium and for geothermal energy.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

The opportunity for leasable and locatable minerals exploration would be foregone. However, the loss of development potential would not be significant because there is only low certainty that economically recoverable minerals are in the WSA. There could be a slight decrease initially in the amount of recreational income to the local area due to the loss of off-highway vehicle (OHV) opportunities. This loss may be negated with an increase in primitive recreation use. The potential Federal revenues for oil and gas leasing ($18,838) would be lost. Expenditures for mineral exploration would not occur. Overall, the regional effect on economics would be small.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 167 inputs specifically addressing this WSA were received from 181 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 168 commenters supported wilderness designation for part or all of the WSA, while six commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values, special features in the WSA, and opportunities for primitive recreation, and noted that wilderness designation would protect the particular values in the WSA. A slight majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict public access. Those opposing wilderness designation were from rural Utah and from other states.

No Federal agencies commented on the Draft EIS for this WSA.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the Mill Creek Canyon WSA has moderate wilderness values and high conflicts compared with the other WSAs in the region. According to the State, conflicts include a moderate potential for potash, uranium/vanadium and petroleum; grazing; and future vegetation manipulation for wildlife. The State suggested that some management designation be studied to protect the unique perennial stream in the WSA.

The Mill Creek Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Mill Creek Canyon WSA should not be designated wilderness because only a small part of it has wilderness values and there is a moderate potential for development of oil, gas, potash, and uranium. The Commission supports conventional multiple use management of the WSA to facilitate the local movie industry, mountain biking, and other varied recreational pursuits. The commission believes that the geology and ecology of the area is essentially identical to features already within FS wilderness and National Parks in the region.

MILL CREEK CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

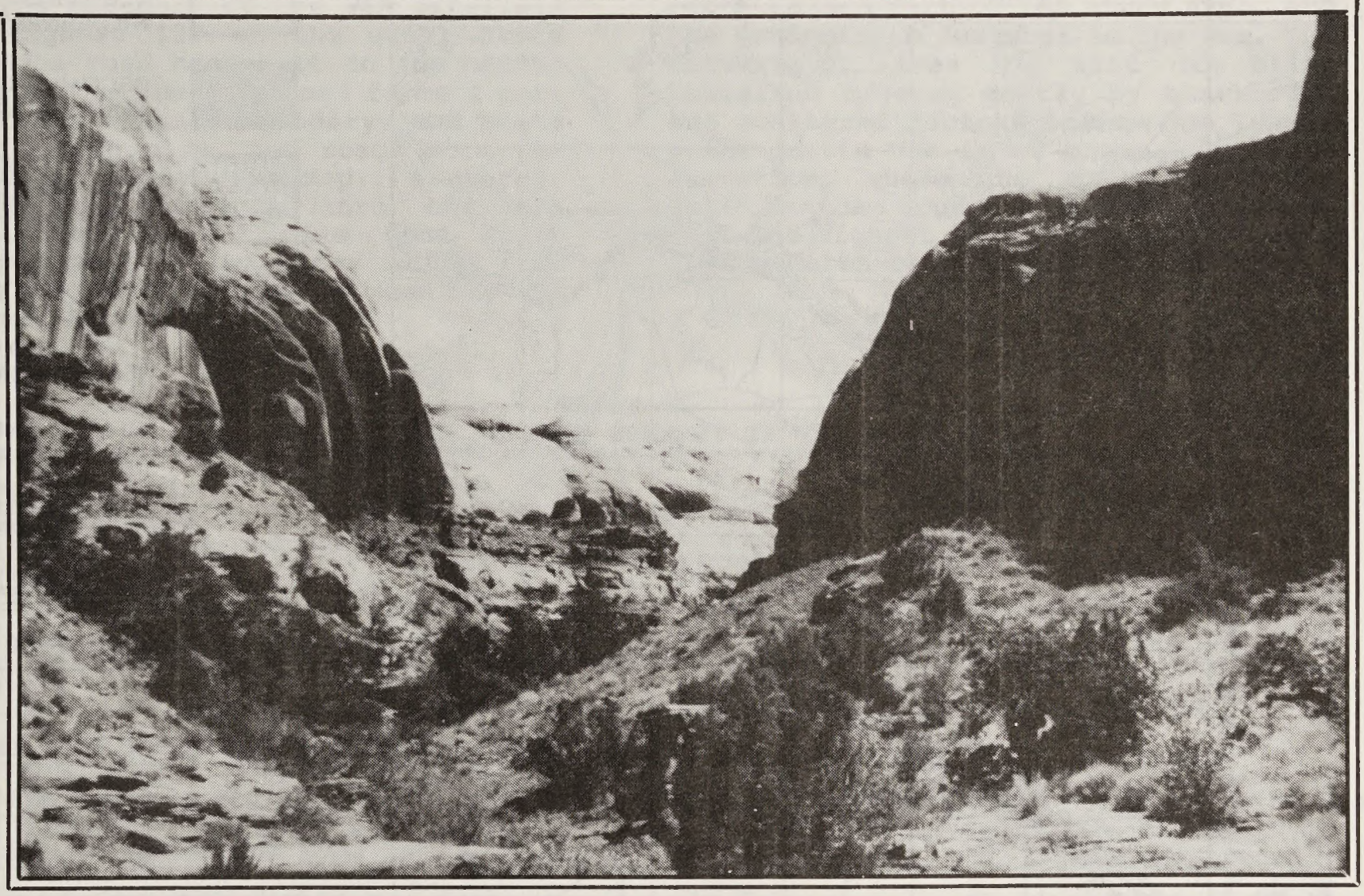
	Alternatives	
Issue Topic	Recommendation All Wilderness (9,780 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the WSA.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 41 acres and indirectly reduced in quality on up to 1,467 acres. The loss would be due to mineral exploration activities. Special features would not be significantly affected. Vehicular use of 4 miles of ways and future exploration roads would occasionally detract from opportunities for solitude and primitive recreation in the WSA.
Impacts on Mineral and Energy Exploration and Production	The opportunity for leasable and locatable minerals exploration would be foregone. However, the loss of development potential would not be significant because there is only low certainty that economically recoverable minerals are in the WSA and the probability of development is low even if the WSA is not designated wilderness.	Oil and gas or other minerals exploration or development would not be affected because mineral leasing, location of mining claims and development would not be restricted for protection of wilderness values.

MILL CREEK CANYON WSA

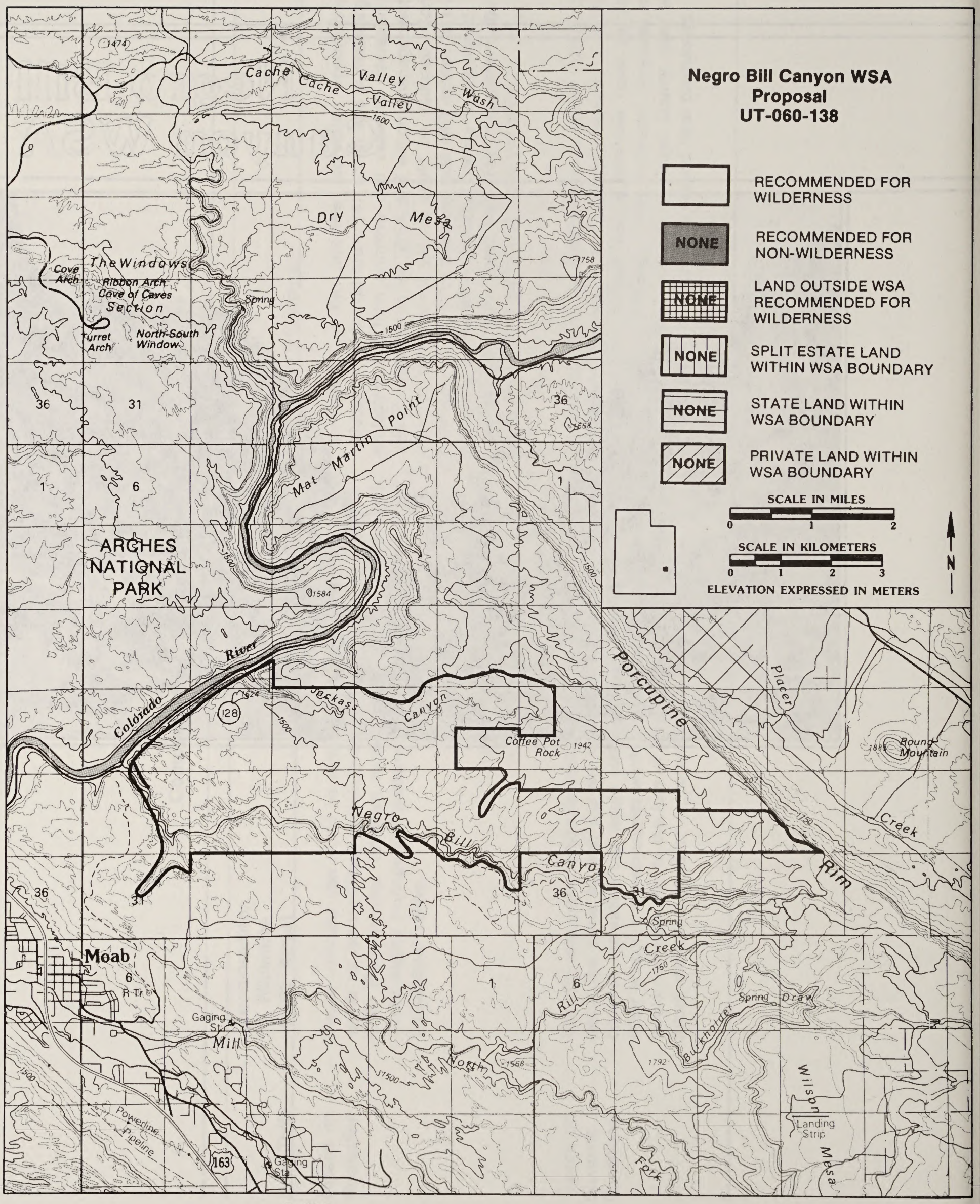
Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (9,780 Acres)	Alternatives: No Action/No Wilderness
Impacts on Recreation	Future vehicular use would be eliminated with this alternative. This would not be significant regionally because there are other suitable ORV areas nearby. Primitive recreation use would increase and would require management guidance to prevent loss of the inherent recreational values.	The quality of the primitive recreation opportunity would be reduced on disturbed areas (41 acres) and surrounding areas. It is projected that both primitive and vehicular recreation use would steadily increase in the WSA and without management constraints, inherent recreational values could be reduced. Some primitive recreation use may be displaced with ORV-related use in the future, especially if new mineral-related access is developed. This impact, however, will be tempered with ORV management that would limit future ORV use to designated roads and trails.
Impacts on Economic Conditions	With this alternative, economic conditions in Grand County would be about the same as with the No Action/No Wilderness Alternative because recreation use would increase and no major mineral or other economic developments would be foregone. Federal revenues would decrease due to the loss of leasing rental fees and possible future mineral exploration opportunities.	The economics of the local recreation-related businesses would be beneficially affected by the projected increase in recreational use. Also, additional mineral leasing revenues could be expected with this alternative. Although these increased revenues may not significantly affect the economy of Grand County, they would appreciably increase the income of several local businesses.

Negro Bill Canyon WSA



NEGRO BILL CANYON WSA



October 1991

NEGRO BILL CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 7,620 acres

The Negro Bill Canyon Wilderness Study Area (WSA) (UT-060-138) is in Grand County, about 1.5 miles northeast of Moab, Utah (population 5,333). The study area is an elongated unit about 2.5 miles at the maximum from north to south and about 8 miles long from east to west. The boundary of the WSA parallels State Highway 128 on the west; State land and a road border it on the north; the Porcupine Rim jeep road forms a portion of the eastern boundary; and State lands, canyon rims, and roads form the southern boundary (see Map). A cherry-stemmed road extends into the WSA approximately a 0.5 mile from State Highway 128. Most visitors enter from the parking area located between the WSA and State Highway 128.

The WSA contains 7,620 acres of public land administered by the Bureau of Land Management (BLM). There are no private, State, or split-estate lands inheld in the WSA (see Table 1). The Colorado River is directly west of the WSA. Two westward-trending canyons, Negro Bill Canyon along the southern margin of the study area, and Jackass Canyon in the northwestern part of the study area, are the predominant features in the WSA. The intercanyon area is flat to hilly tableland covered mostly by blackbrush and scattered juniper trees. The lowest point in the WSA is at about 3,995 feet elevation, where the stream in Negro Bill Canyon approaches State Highway 128. The highest point is at 4,769 feet, in the north-central part of the WSA.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	7,620
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	7,620
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	7,620
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	7,620
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

2. RECOMMENDATION AND RATIONALE:
7,620 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

Almost all of the WSA is in a natural state and nearly one-third of the area has outstanding opportunities for solitude and primitive recreation. Oil and gas, potash, and uranium and vanadium resources may occur in the WSA, but the likelihood of their development is low. The value of the area for wilderness purposes outweighs the value of potential mineral uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. In total, approximately 600 acres do not meet the naturalness criterion. The remaining 7,020 acres are in a natural state and meet the criterion.

The WSA is generally natural in character and appears relatively unaltered by man, but there are exceptions. A seismograph line extends 3 miles into the northern third of the unit. The line was constructed in 1962 and has been reclaimed in part but remains substantially noticeable at some locations. A cross line extends both north and south from the main line in T. 25 S., R. 22 E., section 21. The southern line extends for 1.25 miles and ends in a star pattern. The northern portion of this line extends from the northeast through Jackass Canyon and joins the vehicle route forming a portion of the northern border (which is part of the Porcupine Rim Trail). Several additional seismograph trails are evident in this area, as well as in the northern and eastern portions of the WSA. A small pre-FLPMA livestock reservoir is in the southeast corner of Section 13. A post-FLPMA fence is found 2.5 miles from the mouth of Negro Bill Canyon in Main Canyon. It is about a 0.25 mile long and is constructed with green metal posts and four-strand barbed wire. This livestock fence was constructed to keep cattle in the upper section of the canyon except for authorized trailing purposes above the hiking trail to Morning Glory Natural Arch. A set of wood steps was constructed at the fence to facilitate hiker use. Most of the imprints are substantially noticeable from viewpoints such as fins and to a lesser degree from ridgetop vantage points. From lower observation points these imprints are less noticeable and, in places, are hard to distinguish.

A mining road was extended up the bottom of Negro Bill Canyon for approximately 1.5 miles (unauthorized) after the passage of FLPMA. Approximately a 0.5 mile of this road at the mouth of the canyon was in existence prior to FLPMA and is cherry-stemmed. At the present time this lower section of the road is substantially noticeable due to continued use by motor vehicles, but has reclamation potential if closed. The upper 1 mile of this road currently functions as the hiking trail in the canyon. Flash flooding, natural revegetation, and BLM trail management actions have combined to make this route substantially unnoticeable as a road. A pre-FLPMA cattle trail extends south from the canyon bottom in T. 25 S., R. 22 E., section 28, to the flats above.

Two helicopter seismic exploration projects occurred within the WSA in 1982 and 1983. Both projects consisted of flying portable drill rigs to several

locations where shallow exploratory holes were drilled. Tailings were backfilled into the holes and the small drill sites were rehabilitated. Total disturbance was less than 1 acre for each project.

B. Solitude

The Negro Bill Canyon portion of the WSA (1,375 acres or 18 percent of the WSA) meets the outstanding criterion for solitude. The balance of the WSA (6,245 acres) does not meet the outstanding solitude criterion for areas under wilderness review.

The WSA offers outstanding opportunities for solitude within portions of the unit due to the variety of topography present.

The size of the WSA is not a contributing factor to the wilderness values present. The area does not give the visitor a feeling of vastness. The configuration of the WSA is of considerable importance in the ability to assure protection of the wilderness values. The eastern and northeastern portions of the WSA are approximately a 0.5 mile wide in places. One finger in the southwest portion of the WSA is less than a 0.25 mile wide where the Moab Slickrock Bike Trail wraps around a side canyon.

Sheer canyon walls provide vertical separation and screening. The depth and winding nature of the canyon enhances topographic screening. In the eastern half of the canyon, the cliff walls become less sheer, with several side canyons branching off the main drainage. Vertical separation is not so pronounced. The winding nature of the eastern half of the canyon provides some screening. The side canyons that branch off the main drainage provide additional topographic screening. Topographic screening is also provided by sandstone fins in the western part of the unit near the canyon mouth.

The upper elevations of the unit consist primarily of windblown sand and sandstone formations. Some topographic screening is also provided by this uneven terrain, but it is less than outstanding. The narrowness of the canyon can detract from the solitude when many people are in the area by limiting their opportunity to avoid each other.

Vegetation screening is provided by riparian vegetation along the creek in Negro Bill Canyon and from moderately dense juniper and pinyon pine growth of trees in the eastern portion of the WSA. Vegetation screening does diminish in the canyon bottom in the upper portion of Negro Bill Canyon and is absent in slickrock and low brush and grass-covered areas.

Solitude is limited in the central portion of the unit outside the canyon environment due to lack of vegetation screening, but increases in the northern and eastern portions of the WSA.

Sights and sounds of human activity outside the WSA are observable from some locations within the WSA. The western edge of the unit parallels State Highway 128, which is the major route between Moab and the community of Castle Valley. Also, portions of the Sand Flats Road are visible from the eastern portion of the unit. The Slickrock Bike Trail lies adjacent to the WSA on the south. The activities of people outside the WSA, primarily vehicle use with its associated noise, could adversely affect the opportunity for solitude in areas scattered throughout the WSA.

A visitor could easily find a secluded spot in the eastern portion of Negro Bill Canyon or in the fin portion near the western boundary. Opportunities are somewhat diminished in the lower portion of the canyon due to the WSA's narrowness. It would be difficult to find seclusion in the central portion of the unit due to lack of vegetation and topographic screening.

C. Primitive and Unconfined Recreation

Primitive and unconfined recreation opportunities are outstanding on 2,300 acres of the WSA (the canyon and fins areas) and are less than outstanding on the remaining 5,320 acres.

Portions of the canyon provide outstanding opportunities for hiking, camping, backpacking, and nature study. Sandstone fins near the mouth of the canyon also provide outstanding recreational hiking

opportunities. The colorful sandstone formations, particularly in and near Negro Bill Canyon, offer excellent photographic opportunities. Horseback riding is gaining popularity in the WSA.

D. Special Features

Approximately 55 percent of the WSA is rated as outstanding for scenic quality.

Negro Bill Canyon is one of the few side drainages to the Colorado River in Utah that contains a perennial stream. This is of particular significance when considering its proximity to the community of Moab, making it easily available for public use. The WSA has approximately 6 miles of perennial stream.

Cougar and black bear which are wildlife species associated with wilderness may occasionally visit the area.

Three animal species (black-footed ferret, bald eagle, and peregrine falcon) listed as endangered and seven other animal species that are considered sensitive may occur in the WSA.

The Jones Cycladenia, Cycladenia humilis var. jonesii, a threatened plant species and one additional plant species that is considered sensitive may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Morning Glory Natural Bridge (arch) is the main destination for hikers using the WSA. Morning Glory Natural Bridge is located at the head of a tributary canyon on State land just outside of the WSA. With a length of 243 feet, Morning Glory Natural Bridge is the sixth longest natural rock span in the United States. BLM is currently attempting to acquire the State land that includes this outstanding feature through exchange.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (7,620 acres), which is well represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,136,385
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,698,578

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Negro Bill Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 93 areas comprising 5,475,207 acres in Utah, Arizona, and Colorado, the adjacent states nearest the WSA.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,252,055
Provo-Orem, Utah	11	721,793	90	2,779,248

Source: BLM File Data.

A Negro Bill Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are four designated wilderness areas within 100 miles of the WSA. About 50 miles southwest of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]); to the southeast, in Colorado are the 41,189-acre Lizard Head Wilderness (FS) and the 16,505-acre Mt. Sneffels Wilderness (FS); to the east, also in Colorado, is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The Negro Bill Canyon WSA can be managed as wilderness to preserve the values now present in the area. Current uses such as livestock grazing and maintenance of a 0.25 mile of fence and one small livestock reservoir would continue with little or no effect on wilderness values. Even though there are 368 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 3,200 acres of mining claims in the WSA but, because of low resource potentials, development is not expected following wilderness designation. There are no private or State in-holdings or other valid rights in the WSA that would significantly affect wilderness values.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Negro Bill Canyon WSA (USGS Bulletin 1754-D, Susan Bartsch-Winkler, et al., 1990). The report indicates that no mineral resources were identified in the study area. The mineral resource potential for gypsum, potash, halite (rock salt), and bentonite on the surface and in the subsurface beneath the WSA is high. The energy and mineral resource potential for oil, gas, carbon dioxide, uranium, and vanadium on the surface and beneath the WSA is moderate. The potential for helium gas, geothermal sources, and metals other than uranium and vanadium is low.

NEGRO BILL CANYON WILDERNESS STUDY AREA

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 165 inputs specifically addressing this WSA were received from 398 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 380 commenters supported wilderness designation for part or all of the WSA, while eight commenters were opposed. Ten commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the need to protect the wilderness values in the WSA from development, preserve those values for future generations, and add the diversity of the WSA to the NWPS. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and conflict with motorized recreation. Most of those opposing wilderness designation were from rural Utah and from outside the state.

No Federal agencies commented on the Draft EIS for this WSA.

No comment letters were received on the Final EIS.

There are no State in-holdings in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that Negro Bill Canyon has relatively low wilderness values and the highest degree of conflict compared to the other WSAs in the region. The State also pointed out that there are some special features in the area accessible only through the WSA (e.g., Morning Glory Natural Bridge). State identified conflicts include a moderate potential for oil and gas, uranium/vanadium, potash, and water resource development. The State commented that the Grand Resource Management Plan recommends part of the WSA for Outstanding Natural Area (ONA) management and that this would allow for protective management of the WSA's unique wilderness resources while allowing other nonwilderness uses in the parts not designated as an ONA.

The Negro Bill Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that Negro Bill Canyon could more appropriately be managed under multiple use management guidelines. The Commission noted that wilderness designation would conflict with County proposed recreational and commercial uses of the canyon.

NEGRO BILL CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (7,620 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve wilderness values, including naturalness, outstanding opportunities for solitude and primitive recreation, and the special features of Class A scenery, endangered or special status species, wildlife associated with wilderness, and a perennial stream, wherever these values occur in the WSA.	Wilderness values would not be protected by wilderness designation, and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 40 acres of the WSA due to mineral exploration activities. Vehicular use of 0.5 mile of road and exploratory roads as well as ORV activity on the flats above the canyons would continue to be an annoyance that would detract from opportunities for solitude and primitive recreation in the WSA. As much as 760 acres would be directly affected. The quality of opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 3,050 acres adjacent to the areas of disturbance. Some special features, including Class A scenery and wildlife associated with wilderness, would be disturbed.
Impacts on Vegetation	Vegetation types and special status species would be preserved by the All Wilderness Alternative because surface disturbance would not occur.	Vegetation types would be altered on 0.5 percent of the WSA. Continued management of the threatened, endangered, or other special status species would be required to insure that ORV use would not threaten populations of two special status plant species.
Impacts on Mineral and Energy Exploration and Development	Wilderness designation would preclude potential oil and gas exploration opportunities. Significant production of locatable, leasable, or salable minerals would not be foregone because the probability of development is low even if the WSA is not designated wilderness.	Mineral and energy resource exploration and production in the Negro Bill Canyon WSA would not be affected because mineral leasing, location of mining claims and mineral development would not be restricted for protection of wilderness values.

NEGRO BILL CANYON WSA

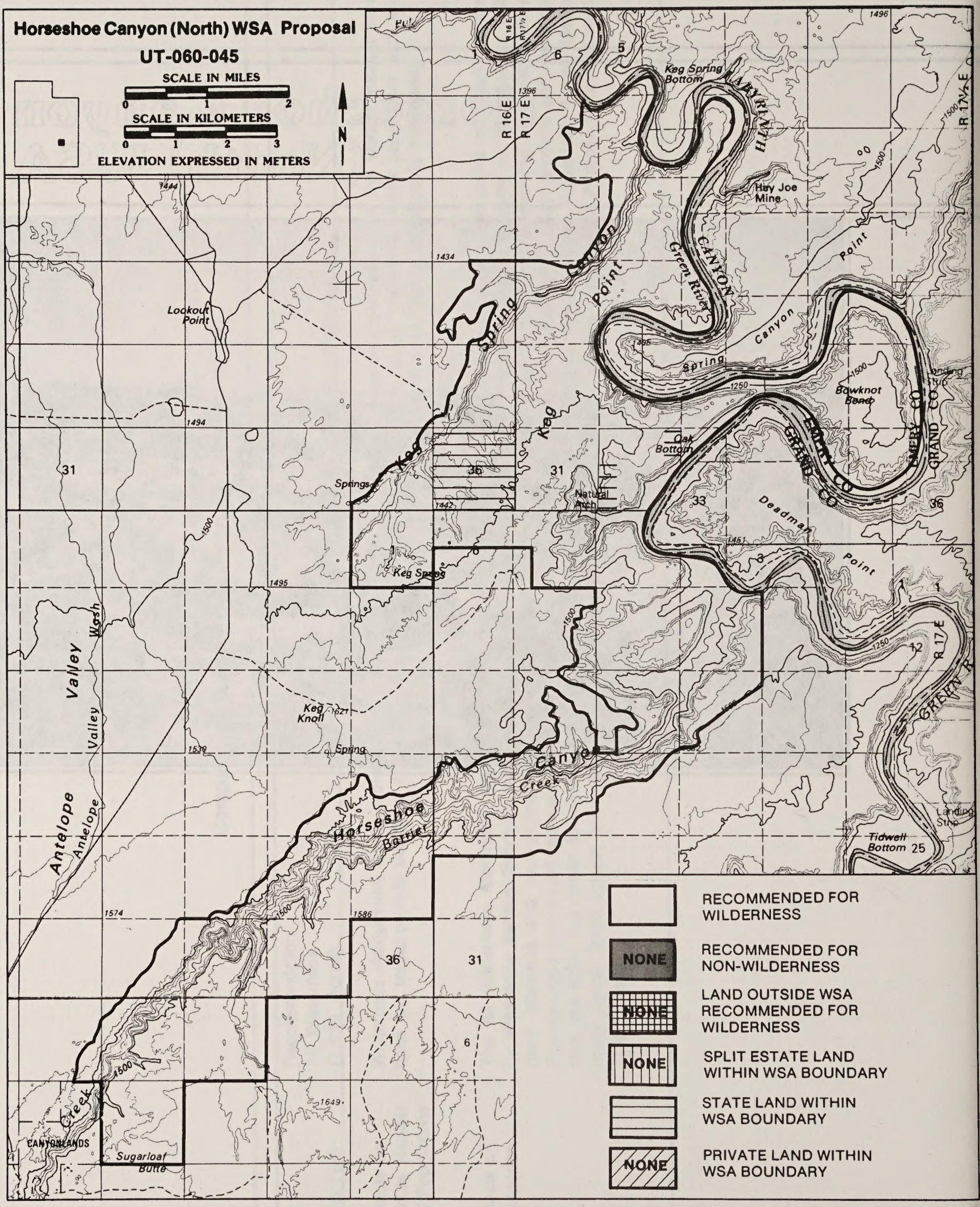
Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (7,620 Acres)	No Action/No Wilderness
Impacts on Wildlife Habitat and Populations	Wilderness designation would protect wildlife habitat and populations and would provide additional solitude.	About 0.5 percent (40 acres) of the wildlife habitat in the WSA would be disturbed. Therefore, wildlife populations including special status species would not be significantly decreased.
Impacts on Recreation	The All Wilderness Alternative would benefit primitive recreation by eliminating surface-disturbing activities and increasing management attention and recognition of primitive recreation values. Primitive-type use would increase. ORV use would be eliminated from the WSA, but would not decline regionally because there are many similar areas outside but near the WSA that would be available for use.	The quality of primitive recreation would be directly reduced on up to 800 acres and indirectly reduced on as much as 3,050 acres more. This would be due to oil and gas exploration and increased ORV use in accessible areas. Both primitive and motorized recreational use would increase in the foreseeable future. Limitation may have to be imposed on visitation in order to protect resource values.

Horseshoe Canyon (North) WSA



HORSESHOE CANYON (NORTH) WSA



October 1991

HORSESHOE CANYON (NORTH) WILDERNESS STUDY AREA

1. THE STUDY AREA: 20,500 acres

The Horseshoe Canyon (North) Wilderness Study Area (WSA) (UT-060-045) is in southeastern Emery County and northeastern Wayne County, about 30 miles south of Green River, Utah (population 1,048). Approximately 18,580 acres of the WSA are in Emery County and 1,920 acres are in Wayne County.

The study area is elongated in a general curve along lower Horseshoe Canyon, and is about 12 miles from northeast to southwest and 8 miles across, from east to west. The northeastern part of the eastern boundary of the WSA is along the Green River.

Most of the boundary of the WSA is along topographic breaks and is adjacent to State lands on the west and the south and the Horseshoe Canyon Unit of Canyonlands National Park on the southwest (see Map). The WSA contains 20,500 acres of public land administered by the Bureau of Land Management (BLM). There is one State section and part of another (760 acres) inheld within the WSA (see Table 1).

The study area is located in the lower end of Horseshoe Canyon, a tributary of the Green River. Barrier Creek runs through the bottom of the canyon. The northern portion of the WSA is Keg Point.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	20,500
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	760
Total	21,260
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	20,500
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	20,500
In-holdings (State, private)	760
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

HORSESHOE CANYON (NORTH) WILDERNESS STUDY AREA

The terrain in the study area consists of sandy flats and hilly areas between the canyons, which are 1,000 feet deep where they join the Green River. The bottoms of the canyons are inaccessible in several places. Elevations in the WSA range from 4,000 feet at the junction with the Green River to more than 5,400 feet at the top of Horseshoe Canyon. Desert shrub and sagebrush are the dominant forms of vegetation in about half of the WSA. Scattered desert shrub, small areas of grassland, and riparian vegetation are found in the remainder of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 1,830 acres of the Horseshoe Canyon (North) WSA in the Bowknot Bend Area of Critical Environmental Concern (ACEC) to protect relict vegetation. Special management requirements now in effect within the ACEC include closing the area to off-highway vehicle (OHV) use, management of the area to meet Class I visual resource management guidelines, closure to oil and gas leasing, and proposed withdrawal from locatable mineral entry, where consistent with valid existing rights. Additional acreage outside of the ACEC and within the WSA has been identified as "primitive" through the Recreation Opportunity Spectrum (ROS) classification system (ROS-P class). Special management conditions to protect this class are the same as within the ACEC.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   20,500 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness.

This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the WSA meets the naturalness criterion. Deeply incised canyons penetrate rolling, sandy hills and provide outstanding opportunities for solitude and primitive recreation. Special features are of geologic, scenic, historic, archaeological, wildlife, and ecological value. Almost all of the area recommended for wilderness designation is in the Bowknot ACEC and ROS-P class where restrictions on OHVs and mineral and energy exploration and production would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Potash and uranium/vanadium resources may occur in the study area and the segment of the Green River that borders the WSA has been identified as a potential hydropower site. Potash and hydropower in this area have low potential for development. Limited uranium development on valid claims is projected following designation, and an unknown portion would be foregone. However, the WSA is not a likely site for uranium mining because uranium resources may be found in more accessible geologic formations elsewhere in the vicinity.

Wilderness designation would complement management of the adjacent Canyonlands National Park Horseshoe Canyon Unit. In conjunction with the Horseshoe Canyon (South) WSA (UT-050-237), designation would create a 30-mile long wilderness corridor from Hans Flat to the Green River.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

Imprints resulting from human activity are localized and do not detract from the WSA's natural character. Although these imprints combined total approximately 410 acres, the naturalness criterion is met for the entire 20,500-acre WSA. Approximately 2,400 acres can be considered untouched in character and include the relict plant communities occurring on isolated parcels within the WSA on the mesa top at Bowknot Bend.

The major imprints surrounding the Horseshoe Canyon (North) WSA have been eliminated by boundary adjustments during the BLM Intensive Wilderness Inventory (USDI, BLM, 1980). What remains of note are the primitive campsites and trails adjacent to the Green River, two seldom-traveled ways, three short livestock trails, three developed springs, one water pipeline, a mining trail, portals, tunnels, and several pieces of equipment. These imprints generally are pre-FLPMA in date.

The two ways are located in the central portion of the WSA, along the southwest border. The ways extend approximately 0.75 mile and 0.5 mile inside the WSA, along two mesa tops of slickrock and sandy flats. The ways were created by blading in the 1960s. Presently, they are being kept evident by periodic vehicular travel. In the summer of 1982, oil and gas exploration was conducted along the second way (0.5 mile) and reclaimed under Interim Management Policy (IMP) constraints.

The three short livestock trails (each approximately a 0.25 mile long) and a water pipeline are located in the southern portion of Keg Spring Canyon. The pipeline was used to transfer water from a spring to a water tank above the canyon. The tank and pipeline are no longer in use. The trails are used periodically by livestock. In September of 1983, a change in class of livestock was approved. This did not affect the naturalness of the WSA.

Along the eastern edge of Bowknot Bend is evidence of mining exploration of the 1950s. From the Green River bottom, an old road cut with steep switchbacks, several portals with tailing piles below, and some mining equipment are visible. An abandoned cable and ferry extend across the river on the north side of the bend and were once used as a means for access to the mining operation. Natural processes are slowly reclaiming the road cuts. Although these imprints combined total approximately 410 acres, the naturalness criterion is met for the entire WSA. Approximately 2,400 acres can be considered untouched in character and include the relict plant communities occurring on isolated parcels within the WSA on the mesa top at Bowknot Bend.

B. Solitude

The entire WSA (20,500 acres) provides outstanding opportunities for solitude. The three major canyon systems, plus the portion of Labyrinth Canyon within the WSA, offer opportunities for users to experience seclusion and isolation. The canyon's meanders, thick canyon bottom vegetation, and 150-foot to 1,000-foot cliffs effectively block lines of sight and suppress sounds for any substantial distance within these canyons. Off-site intrusions and influences are essentially nonexistent within the canyons.

The higher reaches of the WSA, above the canyon drainages, are open and provide great vantage points of the spectacular desert canyon system to the northeast, east, and southeast. Here the vegetation cover is limited and does not effectively screen visitors. The rolling terrain and topographic character of petrified dunes, however, do allow for intermittent separation and seclusion. With an expansive view of the natural surroundings, a user can experience a feeling of remoteness. This is intensified because the WSA is located in a remote portion of the State. Man-made intrusions and sounds are essentially unnoticeable in

many locations in the region outside of the Horseshoe Canyon (North) WSA.

C. Primitive and Unconfined Recreation

The entire WSA (20,500 acres) meets the outstanding primitive recreation criterion for areas under wilderness review.

The Green River corridor, Keg Spring Canyon, Two Mile Canyon, and Horseshoe Canyon are enjoyed by river floaters and hikers for the primitive recreation opportunities they provide. River users have established primitive hiking trails and camps within the WSA. Hikers from Canyonlands National Park explore Horseshoe Canyon and sometimes extend their trip into the WSA. Horseshoe Canyon and Keg Spring Canyon have intermittent running water, pools, pour-offs, and springs throughout their drainage, making them very attractive during the warmer months.

Hiking, backpacking, camping, and cultural exploration are outstanding recreational uses of these canyons. Dramatic sheer red-walled cliffs, pinnacles, knobs, isolated tracts of land, two arches, hanging gardens, and historic remnants within the WSA all contribute to a high quality recreational experience.

In addition to the outstanding activities already mentioned, the striking scenery makes for high quality sightseeing, photography, and artistic endeavors. The occasional observation of wildlife attracted to the water in the area also supplements the user's outdoor experience.

D. Special Features

The WSA includes approximately 20 miles of perennial streams, the majority of which is the Green River along the eastern boundary of the WSA. The entire WSA is rated as outstanding for scenic quality.

The canyons in the WSA expose many geologic strata. The upper reaches provide dramatic views of the twisted and carved character of the area, including cliffs, knolls, alcoves, caves, and arches. Bowknot Bend is a perfect example of the present creation of a rincon. The Green River has carved a large deeply entrenched meander, leaving only a narrow neck to be eroded away before its course takes a shortcut. A completed rincon can be found nearby at the mouth of Horseshoe Canyon.

A variety of historical interests are evident. Adjacent to the southwestern border and an extension of the Horseshoe Canyon drainage, are notable pictographs in the detached Horseshoe Canyon Unit of Canyonlands National Park. Within the Labyrinth Canyon drainage and WSA along the Green River, is evidence of the early river explorers. A river register at Bowknot Bend records the passage of both famous and unknown river runners. Several other rock carvings can be found in the WSA along the river course, adding a distinctly historic flavor to any recreational trip.

Riparian vegetation along the Green River and within the major canyon drainages provides some diversity of habitat for many species of waterfowl, reptiles, and mammals. Habitat diversity and riparian vegetation of the WSA are emphasized by the arid character of the surrounding region.

Several isolated tracts of land in the WSA provide a unique relic vegetation habitat. These areas are inaccessible and remain undisturbed by grazing or browsing animals.

Desert bighorn sheep, a wildlife species associated with wilderness, may frequent the WSA. Six animal species (Colorado squawfish, humpback chub, bonytail chub, black-footed ferret, peregrine falcon, and bald eagle), that are listed as endangered species and seven other animal species that are considered sensitive, are within, or may be within, the WSA. One plant species that is considered sensitive may also occur within the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for more information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is blackbrush (14,385 acres) and galleta-threeawn shrubsteppe (6,115 acres).

Neither blackbrush PNV nor galleta-threeawn shrubsteppe PNV is represented in the NWPS nationally or in Utah. Both PNV types are represented in other BLM study areas, but all are in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Horseshoe Canyon (North) WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	215,679
Galleta-Threeawn Shrubsteppe	0	0	10	184,611
UTAH (COLORADO PLATEAU PROVINCE)				
Blackbrush	0	0	11	215,679
Galleta-Threeawn Shrubsteppe	0	0	10	184,611

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,239,175
Provo-Orem, Utah	11	721,793	90	2,766,368

Source: BLM File Data.

HORSESHOE CANYON (NORTH) WILDERNESS STUDY AREA

As of January 1987, the NWPS included 44 areas comprising 3,143,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A Horseshoe Canyon (North) Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS}) and to the west-southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be effectively managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing would continue with little or no effect on wilderness values. Even though there are 320 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 1,880 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb only small areas (approximately 7 acres) following wilderness designation. The presence of three State inholdings (760 acres) could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. All of the in-held State land is leased for oil, gas, and hydrocarbons. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in small parts of the recommended wilderness.

Due to the rugged terrain in the WSA, management of vehicle use is not expected to be a problem.

There is a 9,215-acre U.S. Bureau of Reclamation power site classification in the WSA that is set aside for development of hydropower. Although there are no plans to develop hydropower in the foreseeable future, the potential does exist. BLM assumes that Congress would eliminate this power site classification at the time of wilderness designation for this WSA.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Horseshoe Canyon (North) WSA (USGS Bulletin 1750, Sandra J. Soulliere, et al., 1988). The report indicates that the study area has no known economic resources, but has inferred subeconomic resources of common variety sandstone and has occurrences of common variety sand and gravel. The entire study area has moderate mineral resource potential for uranium, vanadium, and copper and for oil and gas. The northernmost part of the study area has moderate potential for potash. The entire WSA has low mineral resource potential for all other metals and for geothermal energy.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With implementation of BLM's all wilderness recommendation, restrictions would be placed on the use of resources such as oil, gas and uranium. Therefore, there could be slight losses in local income and Federal and local revenues as compared to conditions without wilderness designation. The potential for 20 to 60 jobs would be foregone. This would not significantly affect the regional economy. Future local recreation-related expenditures could contribute up to $71,540 annually to the local economy by

the year 2020. Up to $39,720 in annual Federal lease revenues would be foregone.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 250 inputs specifically addressing this WSA were received from 865 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 470 commenters supported wilderness designation for part or all of the WSA, while 392 commenters were opposed. Three commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the importance of adding the diversity represented in the WSA to the NWPS. The majority of those commenting in favor of wilderness were from other states. Of particular concern to these commenters was the need to preserve the wilderness values in the WSA for future generations and to protect the area from development.

Those opposing wilderness were concerned that wilderness would preclude mineral development, harm State and local economies, restrict public access and curtail livestock management, be incompatible with multiple use of the area, and undesirably cause alteration of regional air quality designations. Almost all of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the USBM and the National Park Service (NPS), commented on the Draft EIS. The USBM expressed no opinion regarding wilderness designation. However, it stated that BLM underestimated the petroleum potential of the WSA. The NPS recommended wilderness designation. However, it stated that BLM underestimated the petroleum potential of the WSA. The NPS recommended wilderness designation for WSAs adjoining units of the NPS, and thus supported the All Wilderness Alternative for this WSA.

No comment letters were received on the Final EIS.

There is one State section and part of another in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that the WSA has high wilderness values and high conflicts within the region. It also stated that wilderness management would complement recreational use on the Green River and the Horseshoe Canyon unit of Canyonland National Park.

The Horseshoe Canyon (North) WSA contains portions of Emery and Wayne Counties. The master plans for these Counties do not specifically address the WSA. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Wayne County Master Planning Report does not identify recommendations at specific locations.

The plan recognizes that ". . . outstanding natural landmarks should be preserved as much as possible." However, it also states that "Open spaces should be used for many purposes rather than strictly as wilderness areas."

The Emery and Wayne County Commissions are opposed to wilderness designation and have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS for this WSA, the Counties pointed out that wilderness designation would conflict with County land use plans and that it is unwise to encourage groups of people to visit the area and then restrict motorized access for attending to possible accidents caused by old mine shafts and other man made and natural hazards. The Counties be-

lieve the area has substantial potential for resource development, and that designation would interfere with hydropower generation and use of water upstream of the WSA.

HORSESHOE CANYON (NORTH) WSA

Table 4
Comparative Summary of Impacts By Alternative[a]

Issue Topic	Alternatives: Recommendation All Wilderness (20,500 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values throughout the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 13 acres of the WSA and opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 1,435 acres of the WSA as a result of activity on valid mining claims. Special features would be preserved overall, although Class A scenery would be reduced in quality on the disturbed and adjacent areas. The wild and scenic values of the Green River would receive additional protection.	Wilderness values would not be protected by wilderness management and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 50 acres and would be indirectly reduced in quality on up to an additional 5,125 acres. Most special features would not be significantly affected, although Class A scenery would be reduced in quality in the disturbed and adjacent areas. The disturbance would be due to uranium exploration and development, and oil and gas exploration. Vehicular use of the existing 1.25 miles of ways and future roads for mineral exploration and development, and for access to State in-holdings, would occasionally detract from opportunities for solitude and primitive recreation in the WSA.
Impacts on Soils	The potential for soil disturbance and increased erosion would be reduced. Soil erosion would increase by only 0.4 percent.	Soil erosion would increase by approximately 1 percent. There would not be significant secondary off-site effects because projected disturbance would not be along perennial streams, the soils are low in salinity, and mitigation would be required.
Impacts on Mineral Exploration and Production	The opportunity for oil and gas exploration and production of an unknown quantity of uranium would be foregone. A portion of the potential uranium resource would be recovered from valid claims following wilderness designation.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims and mineral development could occur without restrictions for protection of wilderness values. Within the ACEC and ROS-P class, plans of operation would continue to be required on all valid claims, no oil and gas leases would be issued, and the area would be proposed for withdrawal from locatable mineral entry.

HORSESHOE CANYON (NORTH) WSA

Table 4 (Continued)
Comparative Summary of Impacts By Alternative

Issue Topic	Alternatives Recommendation All Wilderness (20,500 Acres)	No Action/No Wilderness
Impacts on Cultural Resources	Cultural resources including four known sites would be protected from most surface disturbance and all vehicular access. The benefits of protection would probably outweigh negative effects of increased vandalism due to increased future recreational use. Management may be restricted in scope and execution in order to protect other wilderness values.	Surface disturbance due to mineral location and leasing may have some impact on cultural resources, but it is expected to be minimal because only 0.2 percent of the WSA would be disturbed as mitigation would be required. Continued vehicular access is expected to have only minor impacts on archaeological sites because vehicle use is restricted by rugged terrain. Cultural resource management could continue without regard to wilderness management.
Impacts on Economic Conditions	Existing economic conditions would not be affected. Potential local employment would be reduced by 20 to 60 jobs in the foreseeable future. Future local recreation-related expenditures could contribute up to $71,540 annually to the local economy by the year 2020. Up to $39,720 in annual Federal lease revenues would be foregone.	Local economic conditions and trends would not be affected. Uranium development would employ up to 80 people at one time in the foreseeable future. This would represent about an 8 percent increase in projected employment in Wayne County or 1 percent increase in projected employment in Emery County in the year 2010. Recreation-related expenditures could contribute up to $71,540 annually to the local economy by the year 2020. Present and future oil and gas leases could contribute up to $39,720 annually in Federal lease revenues.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive management practices established by the RMP.

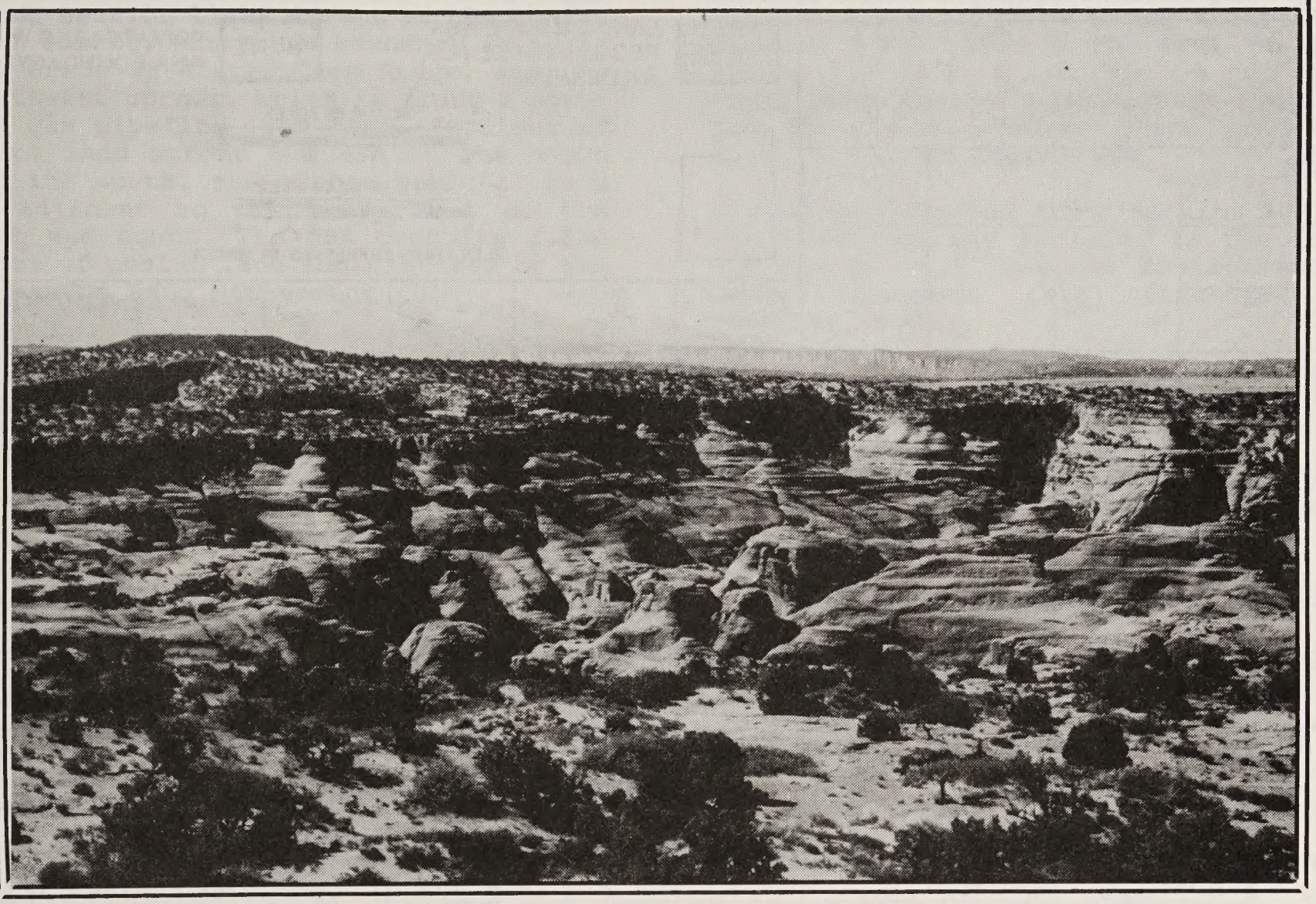
HORSESHOE CANYON (NORTH) WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

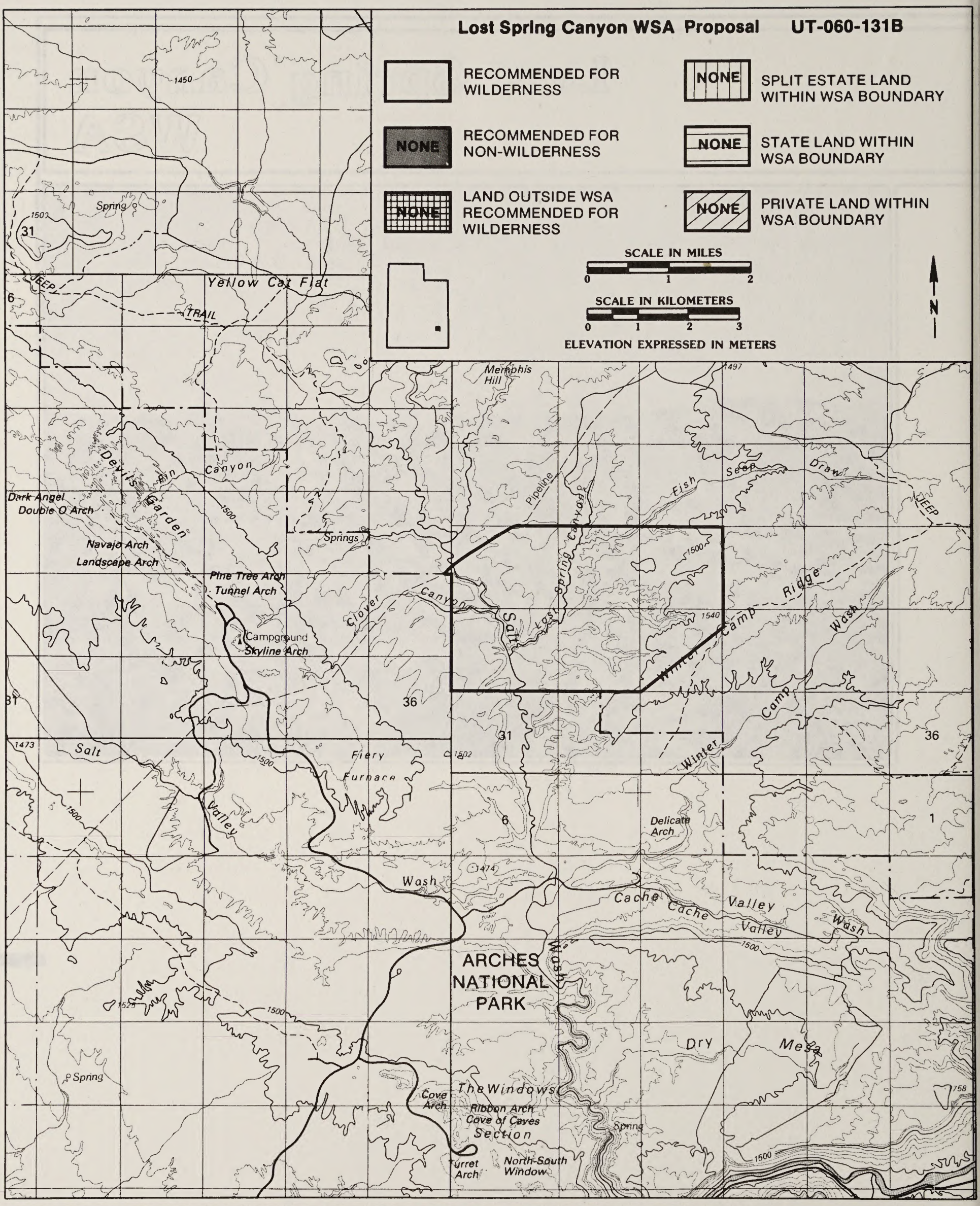
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 25 S., R. 16 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 25 S., R. 17 E., Sec. 32	120.00		State	State	No	Exchange		$ 500

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Lost Spring Canyon WSA



LOST SPRING CANYON WSA



October 1991

LOST SPRING CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 3,880 acres

The Lost Spring Canyon Wilderness Study Area (WSA) (UT-060-131B) is in south-central Grand County, about 10 miles north of Moab, Utah (population 5,333). The WSA extends about 2 miles from north to south and 3.5 miles from east to west. The boundaries of the WSA are along section lines except at the southeast corner, where the boundary is along the crest of Winter Camp Ridge, and the northwest corner, which is along a natural gas pipeline (see Map). Sections of State land border the WSA on the north and the south, and Arches National Park is adjacent to the study area on the west and south. The WSA contains 3,880 acres of public land administered by the Bureau of Land Management (BLM).

There are no private, State, or split-estate land in-holdings in the WSA (see Table 1).

The unit consists of portions of two canyons and short tributaries, bounded by 300 to 400 foot cliffs, and open, sparsely vegetated flats in the northwestern portion of the WSA. No perennial streams are within the study area. Elevations range from 4,400 feet on the canyon floors to 5,142 feet on top of a small mesa in the southeastern part of the study area. Desert shrub predominates over most of the WSA.

The WSA was studied under Section 202 of the FLPMA and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	3,880
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	3,880
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	3,880
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	3,880
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

2. RECOMMENDATION AND RATIONALE:
3,880 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation in this report to designate the entire WSA as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the WSA is in a natural condition. About 75 percent of the area contains outstanding opportunities for solitude and primitive recreation.

The area contains colorful eroded sandstone formations including natural arches, fins, and domes similar to those in the adjacent Arches National Park.

Potash, oil, and gas resources may exist in the WSA. The potential for potash extraction is low. If the WSA is managed in conjunction with the proposed wilderness in the adjacent Arches National Park, wilderness values would outweigh the values of the mineral potential of this WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The area is generally free of human imprints and meets the naturalness criteria for wilderness. The scenic sandstone formations have been unaltered by man. Several seismograph lines were laid on the mesa top in the northern portion of the WSA and there are two ways totaling a 0.25 mile, a 0.25 mile of pinyon pine fence, ORV tracks in wash bottoms, and cattle paths. All are substantially unnoticeable in the area as a whole.

B. Solitude

The WSA has outstanding opportunities for solitude on 2,910 acres (75 percent of the WSA). It does not meet the criterion for outstanding opportunities on the remaining 970 acres.

Terrain is the most important influence on opportunities for solitude. Numerous side drainages to Lost Spring Canyon and Salt Wash have highly eroded relief and block out the sights and sounds of nearby users. Opportunities for solitude within these drainages are outstanding. Solitude found in the main canyons and mesa flatlands is of lesser quality.

Most vegetation within the WSA is low-growing and does not contribute to a feeling of solitude. Some vegetation screening does exist at the higher elevations and in some wash bottoms due to riparian vegetation.

The WSA is affected somewhat by outside influences. At times vehicle traffic within Arches National Park can be heard in the unit. Maintenance activities along the natural gas pipeline, which borders the unit on the north, occasionally are noticeable from within the WSA.

Opportunities for seclusion are many and varied, particularly within the many erosional features and side drainages of Lost Spring Canyon. Opportunities are present to a lesser degree within Salt Wash. Opportunities are generally less than outstanding on the flat mesa tops.

C. Primitive and Unconfined Recreation

Approximately 2,910 acres (75 percent) of the WSA have outstanding opportunities for primitive and unconfined recreation. The WSA provides opportunities for hiking, horseback riding, backpacking, and photography. A diversity of routes can be taken wholly within the WSA and in combination with trips that also include entering the Park. Scenic values contribute greatly to these opportunities. There are also opportunities for rock climbing.

D. Special Features

The most outstanding special feature of this unit is its erosional and geologic diversity. Colorful rock formations, including several natural arches, as well as fins and domes, provide excellent scenery. Some cultural resource values are also present. The entire WSA is rated as outstanding for scenic quality.

Cougar, a wildlife species associated with wilderness, may occasionally visit the WSA. Peregrine falcons and black-footed ferrets, listed as endangered species, may inhabit or frequent the WSA. Four other animal species and five plant species that are considered sensitive may occur within the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland 3,880 (acres). The PNV in the WSA is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	10	1,393,642	84	2,140,125
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,702,318

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Provo-Orem, Utah and the Salt Lake City-Ogden, Utah areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Lost Spring Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,725,438
Provo-Orem, Utah	11	721,793	90	2,784,328

Source: BLM File Data

A Lost Spring Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the south of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), and to the southeast, in Colorado, is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

There are no State or private lands in the WSA. No mineral exploration or development is projected. Continued livestock grazing would be compatible with wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Lost Spring Canyon WSA (USGS Bulletin 1754-C, Sandra J. Soulliere, et al., 1988). The report indicates that the potential for undiscovered oil and gas resources, potash, and halite (rock salt) is moderate. The resource potential for undiscovered geothermal energy and undiscovered metals and nonmetals is low. Large volumes of inferred subeconomic resources of sandstone, sand, and gravel are present within the study area. Common-variety sandstone is exposed over most of the WSA, and sand and gravel are found in two drainages. The isolation of the WSA and the abundance of similar materials in deposits outside the study area make development of deposits that occur within the WSA seem unlikely.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 42 inputs specifically addressing this WSA were received from 40 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 30 commenters supported wilderness designation for part or all of the WSA, while 3 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that wilderness designation would complement proposed wilderness in the adjacent Arches National Park. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness is not compatible with multiple use and designation would prohibit mineral exploration and development. Two of the three commenters opposed to designation of the WSA were from rural Utah and the third was from another state.

One Federal agency, the National Park Service, commented on the Draft EIS for this WSA. The NPS stated that the WSA has potential as an addition to Arches National Park.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation of the WSA. The State commented that the wilderness values are low to moderate compared to other WSAs in the region, that the all wilderness alternative would complement the values found in the adjacent Arches National Park, and that there is a potential conflict with oil, gas, and potash resources. Specific State comments on the Draft EIS dealt with the identification of adjacent State land, clarification of the boundary of Arches National Park, and the possibility of desert bighorn sheep migrating from Arches National Park into the WSA.

The Lost Spring Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that Lost Spring Canyon cannot be effectively managed as wilderness because of adjacent State lands, mineral, oil and gas potentials and visible and audible activities on adjacent lands. The Commission also noted that designation of the area as wilderness would be contrary to the County's overall planning goals, and would not be cost effective because only a small part of the WSA would be disturbed if the area is not designated wilderness.

LOST SPRING CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (3,880 Acres)	 No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the WSA's wilderness values including naturalness, outstanding opportunities for solitude and primitive recreation, and special features including Class A scenery, archaeological sites, endangered and sensitive species, and wildlife associated with wilderness. This alternative would enhance and complement wilderness values, uses and management of the contiguous NPS lands, which are proposed for wilderness designation by NPS.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 40 acres and opportunities for solitude and primitive recreation would be indirectly reduced in quality throughout the WSA. Because of oil and gas exploration, vehicular use of ways, washes, and future energy-exploration roads would also detract from opportunities for solitude and primitive recreation throughout the WSA. Some special features including endangered and sensitive species and wildlife associated with wilderness would not be significantly affected. Special features that would be disturbed include Class A scenery and cultural values. This alternative would not enhance and complement wilderness values, uses and management of the contiguous NPS lands, which are proposed for wilderness designation by NPS.
Impacts on Mineral and Energy Exploration and Production	The opportunity for leasable and locatable minerals exploration would be foregone. However, the loss of development potential would not be significant because there is only low certainty that economically recoverable minerals are in the WSA and the probability of development is low even if the WSA is not designated wilderness.	Oil and gas or other mineral exploration of development would not be affected because mineral leasing, location of mining claims and development would not be restricted for protection of wilderness values.

South Needles WSA

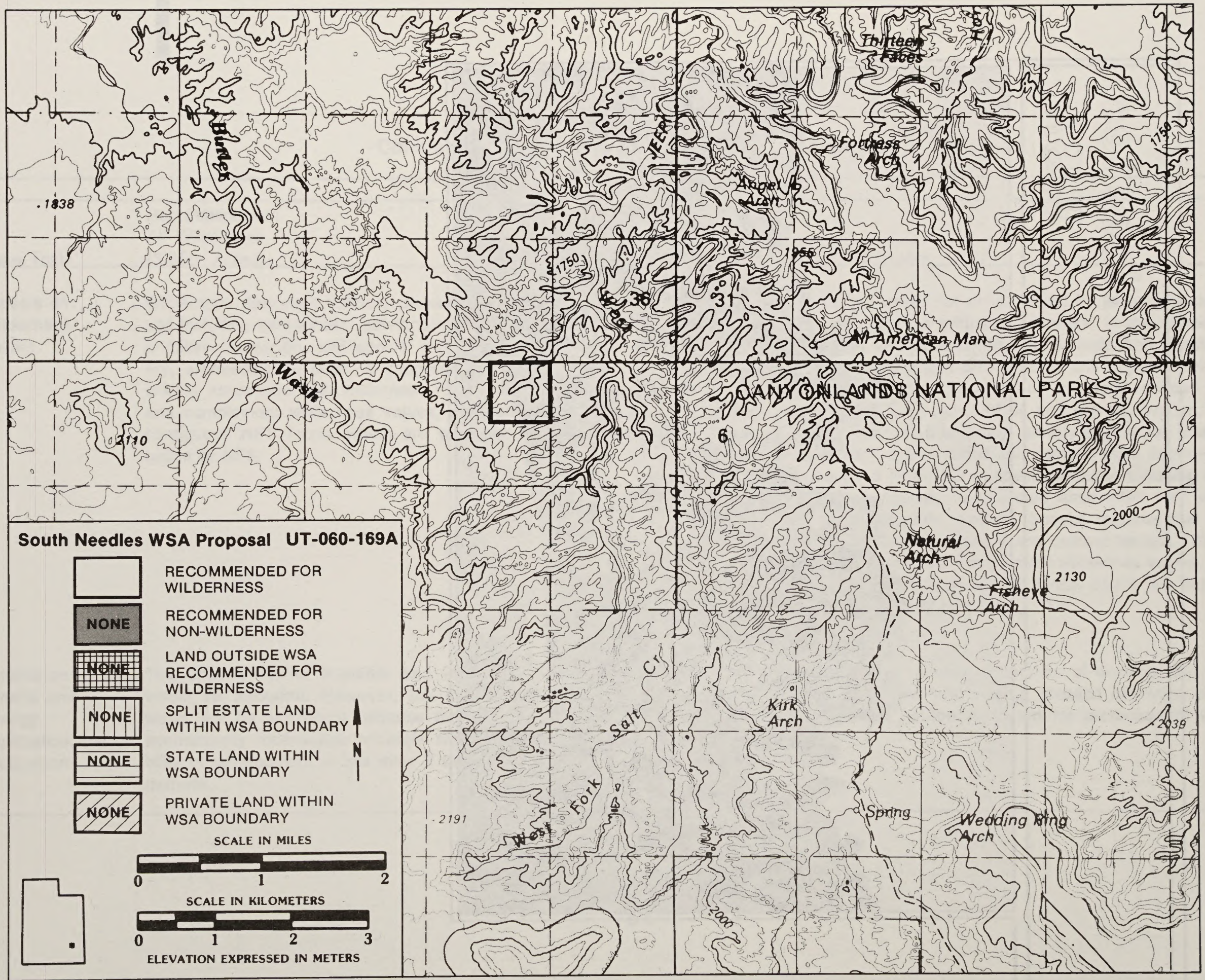


R. 19 E.

R. 20 E.

T. 31 S.

SOUTH NEEDLES WSA



South Needles WSA Proposal UT-060-169A

- RECOMMENDED FOR WILDERNESS
- NONE — RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- NONE — STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES

0 1 2

SCALE IN KILOMETERS

0 1 2 3

ELEVATION EXPRESSED IN METERS

T. 32 S.

October 1991

SOUTH NEEDLES WILDERNESS STUDY AREA

1. THE STUDY AREA: 160 acres

The South Needles Wilderness Study Area (WSA) (UT-060-169A) is in northwestern San Juan County, about 10 air miles northwest of Monticello, Utah (population 1,929). The WSA is a small parcel, extending about a 0.5 mile on each side, contiguous on two sides with Canyonlands National Park and on the other two sides with 480 acres of State land which separates the WSA from the Butler Wash WSA (UT-060-169) (see Map). The WSA contains 160 acres of public land administered by the Bureau of Land Management (BLM). There are no private, State, or split-estate land in-holdings in the WSA (see Table 1).

The terrain consists of sloping slickrock that drains northeastward and low benches. Elevations range from 5,640 feet in the northeast, where the drainages flow into Canyonlands National Park, to 6,240 feet at the southwest corner. Pinyon-juniper woodland grows on the benches.

At the time of BLM's wilderness inventory, this parcel was believed to be State land and it was not included in the Draft Utah BLM State Wilderness Environmental Impact Statement (EIS). The parcel was formally designated as a WSA through a Federal Register Notice dated January 21, 1986. This is in accord with the general planning provisions of Section 202 of the Federal Land Policy and Management Act (FLPMA).

The analysis of the WSA was included in the Utah BLM Statewide Wilderness EIS finalized in November 1990.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	**ACRES**
BLM (surface and subsurface)	160
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	160
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	160
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	160
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no action (no wilderness) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Juan Resource Area Resource Management Plan (RMP). The plan includes all of the South Needles WSA in the Butler Wash Area of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the ACEC, where consistent with valid existing rights, include: closure to off-highway vehicle (OHV) use; stipulations to prevent surface occupancy on oil and gas leases (Category 3); requirement for an approved plan of operations with special conditions to limit surface use for mining related activity; closed to disposal of mineral materials; exclusion from private and commercial use of woodland products, except for limited on-site collection of dead wood for campfires; management to limit recreation use if scenic values are being damaged; management to meet Visual Resource Management (VRM) Class I objectives.

2. RECOMMENDATION AND RATIONALE:
160 acres
(recommended for wilderness)
0 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term.

All of the WSA is in a natural condition and provides outstanding opportunities for solitude and primitive recreation. No conflicts exist with minerals or other uses. Wilderness designation would complement the proposed Needles Wilderness area in the adjacent Canyonlands National Park.

The WSA is in the Butler Wash ACEC where restrictions on OHV use, mineral and energy exploration and development, mineral material disposal, and harvest of woodland products would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

The WSA is not a viable independent candidate for wilderness designation if Congress does not designate the contiguous National Park Service (NPS) proposed wilderness area in Canyonlands National Park. If managed as part of the contiguous NPS unit, the WSA would be part of a viable wilderness area.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

The WSA is in a natural condition with no known intrusions. Several miles of nonmotorized travel are required to reach the unit. No surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

The entire WSA provides outstanding opportunities for solitude. The unit is rugged terrain with pinyon pine, juniper trees, and oak vegetation providing screening for users. The WSA is nearly surrounded by 85,000 acres of land being considered for wilderness designation.

C. Primitive and Unconfined Recreation

The entire WSA offers outstanding opportunities for hiking and backpacking in conjunction with Canyonlands National Park. Other existing and potential uses include hunting, sightseeing, and nature and archaeological study. These opportunities together contribute to diverse, high quality recreational experiences.

D. Special Features

The unit is very scenic. Red and buff spires, knobs, and buttes contrast with green vegetation and blue sky. The highly eroded sandstone features, including numerous pinnacles and the Vanhemert Arch, provide for geologic study and viewing. The entire WSA is rated outstanding for scenic quality.

Two archaeological sites were noted during field work and the potential for finding additional sites is high. A spring on the northern edge of the WSA flows about 0.5 cubic feet per second and supports a small riparian area of cottonwoods, oak, and reeds.

Cougar, which is a wildlife species associated with wilderness, may be found in the WSA. Peregrine falcons, which are listed as an endangered species, may use the study area. The golden eagle, a species considered by the BLM to be sensitive, is found in the WSA. Six other special status animal species and one plant species that are considered sensitive also may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion.

The PNV in the WSA is entirely juniper-pinyon woodland (160 acres). This particular PNV is well represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is not within a 5-hour drive of any major population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The South Needles WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 117 areas comprising 6,988,052 acres in Utah, Arizona, and Colorado, the adjacent states nearest the WSA.

A South Needles Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. About 12 miles south of the WSA is the 45,000-acre Dark Canyon Wilderness (U.S.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,143,845
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,706,038

Source: BLM File Data.

Forest Service [FS]); to the east, in Colorado, is the 41,189-acre Lizard Head Wilderness (FS); and to the west is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA is completely surrounded by State land and Canyonlands National Park and is too small to be effectively managed as designated wilderness. If Congress designates the proposed Needles Wilderness in Canyonlands National Park, the WSA would be a viable part of the NPS wilderness area.

There are no existing oil and gas leases or mining claims in the WSA. No development is expected in the foreseeable future if the area is designated wilderness. No disturbance from ORV activity is anticipated due to the rugged terrain and inaccessibility of the area to vehicles.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the South Needles WSA (USGS Informal Report dated October 23, 1989).

The report indicates that the study area has moderate potential for oil and gas. The report also indicates that the study area has low mineral resource potential for all metals, including uranium, vanadium, copper, gold, silver, potash and halite, coal, and geothermal energy. No mineral resources were identified except for inferred subeconomic resources of sandstone. Because of the abundance of sandstone in the region, the distance from markets, and the lack of unique properties, there is no current likelihood of development.

Impacts on Resources

The comparative impact table (Table 3) summarizes the effects on wilderness values which is considered to be the only pertinent resource that would be significantly affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation for the adjacent Butler Wash WSA were used to develop significant study issues and alternatives for the ultimate management of the South Needles WSA.

Because the South Needles WSA was not analyzed in the Draft EIS, no formal public input specifically addressing this WSA was received.

No comment letters were received on the Final EIS.

SOUTH NEEDLES WSA

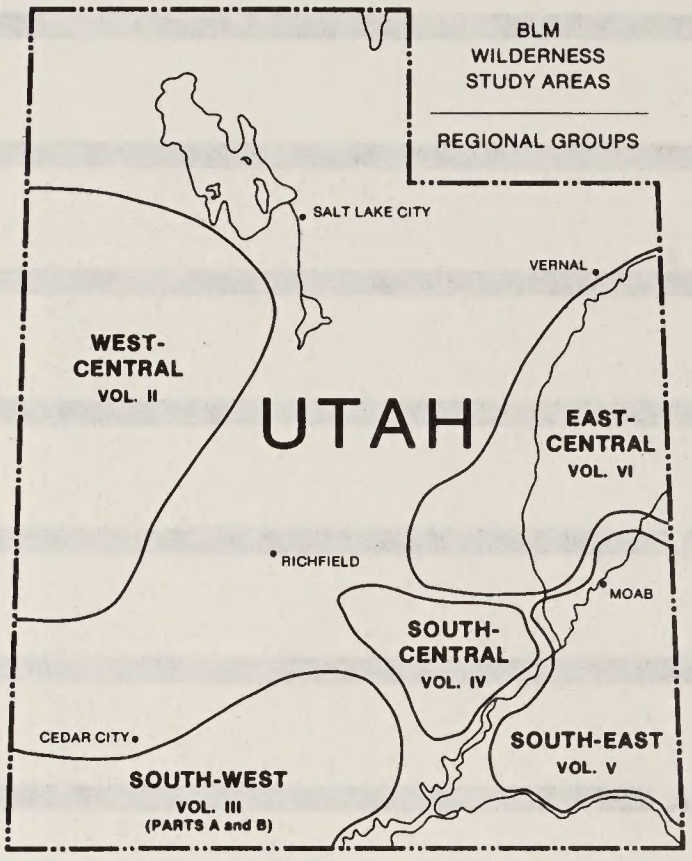
Table 3
Comparative Summary of Impacts by Alternative[a]

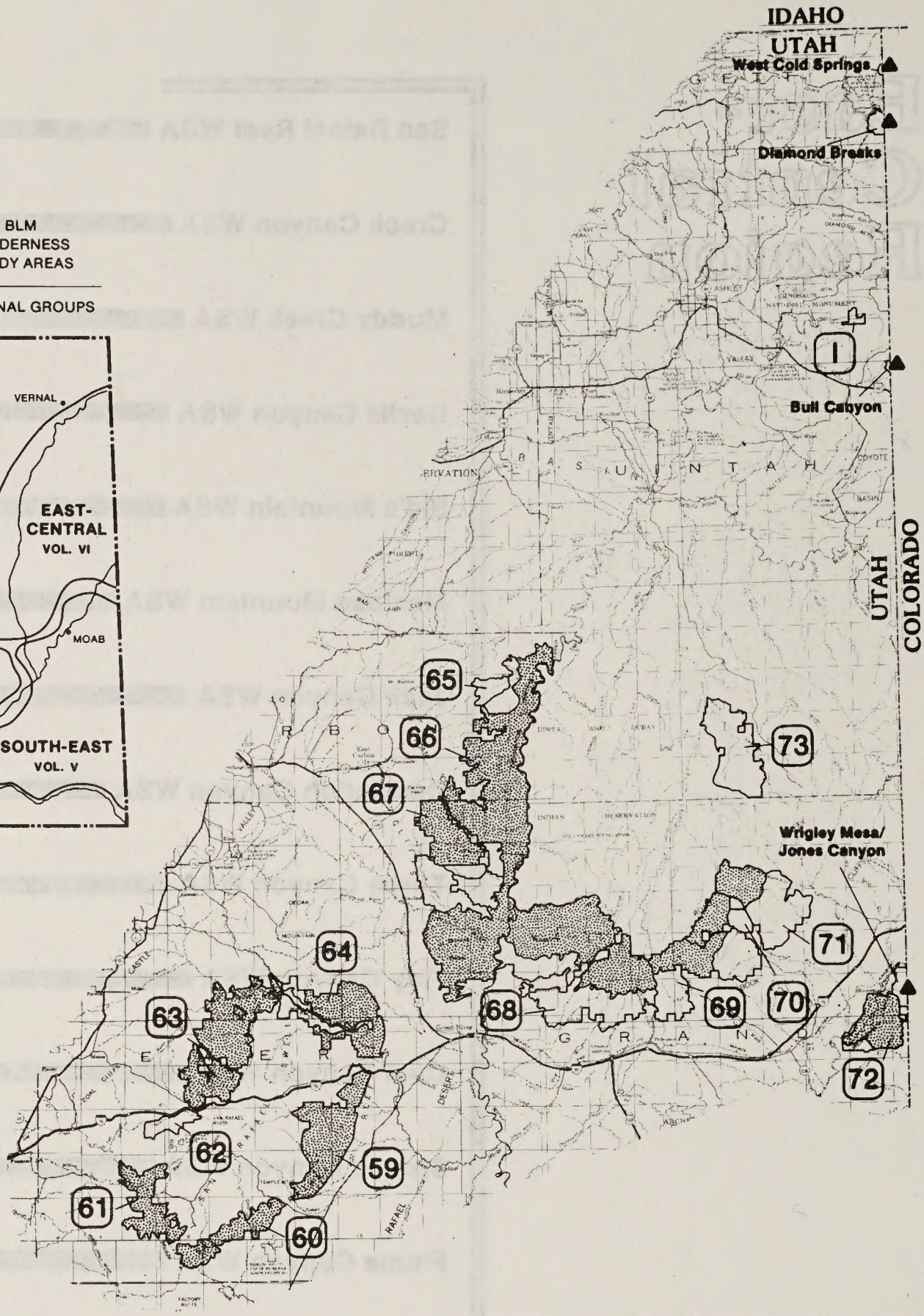
Issue Topic	Alternatives: Recommendation All Wilderness (160 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve the wilderness values in the WSA. This alternative would complement and enhance wilderness values, uses, and management of the contiguous portion of Canyonlands National Park.	Wilderness values would not be protected by wilderness designation. No disturbance that would affect wilderness values is anticipated in the foreseeable future. This alternative would, however, not complement and enhance wilderness values, uses, and management of the contiguous portion of Canyonlands National Park.

East-Central Region

- San Rafael Reef WSA
- Crack Canyon WSA
- Muddy Creek WSA
- Devils Canyon WSA
- Sid's Mountain WSA
- Mexican Mountain WSA
- Jack Canyon WSA
- Desolation Canyon WSA
- Turtle Canyon WSA
- Floy Canyon WSA
- Coal Canyon WSA
- Spruce Canyon WSA
- Flume Canyon WSA
- Westwater Canyon WSA
- Winter Ridge WSA
- Daniels Canyon WSA

EAST-CENTRAL REGION
LOCATION MAP





BLM RECOMMENDATION

BLM WSAs or portions of WSAs that would be designated wilderness

BLM WSAs or portions of WSAs that would NOT be designated wilderness

▲ BLM WSAs under study by adjacent state

MAP REFERENCE NUMBER/STUDY AREA

59 San Rafael Reef WSA
60 Crack Canyon WSA
61 Muddy Creek WSA
62 Devils Canyon WSA
63 Sid's Mountain / Sid's Cabin WSA
64 Mexican Mountain WSA
65 Jack Canyon WSA
66 Desolation Canyon WSA
67 Turtle Canyon WSA
68 Floy Canyon WSA
69 Coal Canyon WSA
70 Spruce Canyon WSA
71 Flume Canyon WSA
72 Westwater Canyon WSA
73 Winter Ridge WSA
I Daniels Canyon WSA

San Rafael Reef WSA



SAN RAFAEL REEF WSA

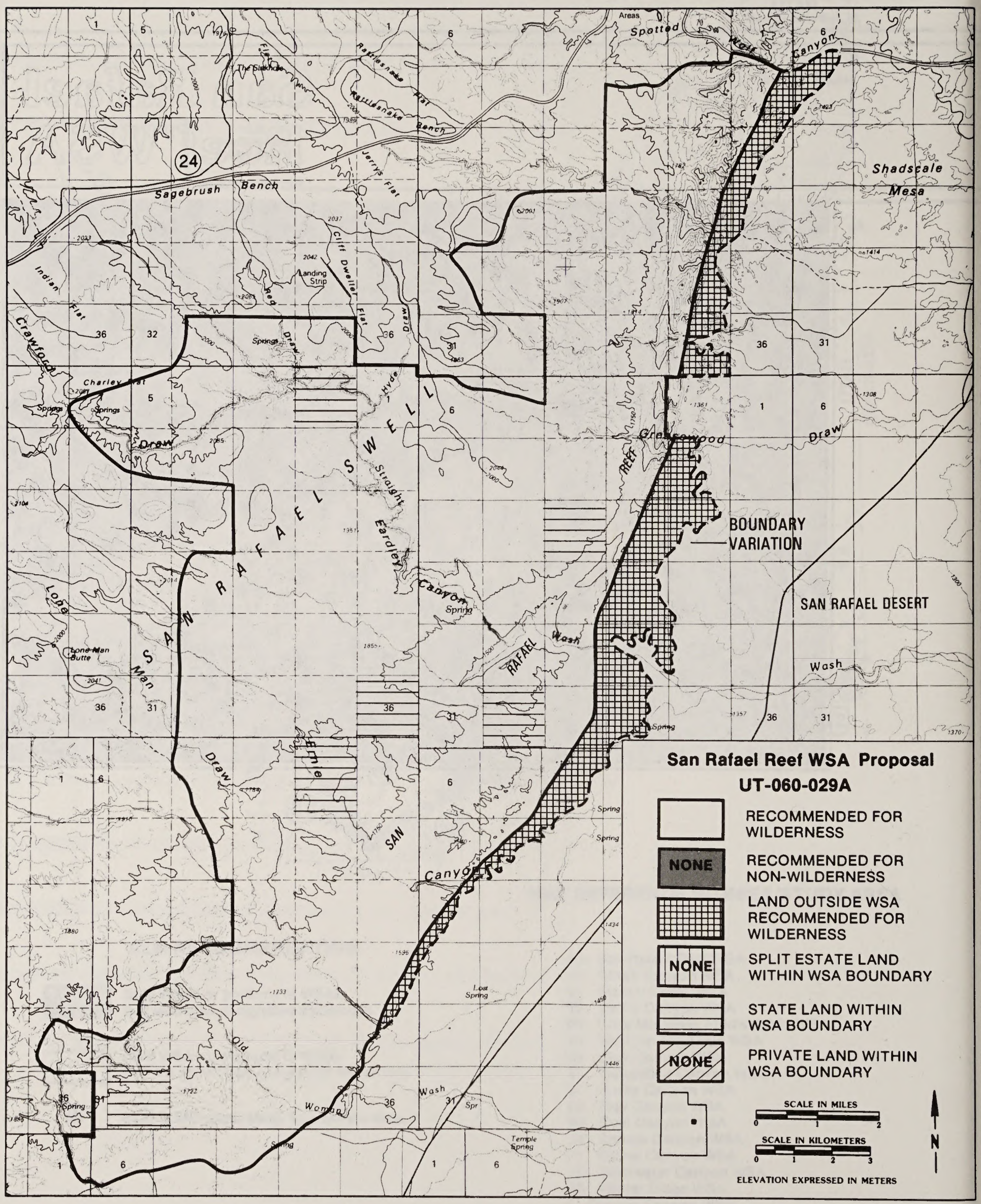
R. 12 E.

R. 13 E.

T. 22 S.

T. 23 S.

T. 24 S.


Areas
Spotted
Wolf
Canyon
Shadscale
Mesa
Rattlesnake Flat
Rattlesnake Bench
The Slickhole
Jerry's Flat
Sagebrush Bench
Landing Strip
Cliff Dwellers Flat
Indian
Crawford
Charley Flat
Springs
Draw
Hyde
Straight
Eardley
Canyon
Spring
Lone
Lone Man Butte
Man
Creekwood
Draw
REEF
BOUNDARY
VARIATION
SAN RAFAEL DESERT
RAFAEL
Wash
Spring
Temple Spring
Lost Spring
Old
Woman
SAN
Canyon
Spring
Spring
Wash
Spr
Spring
Spring
Spring

SAN RAFAEL REEF WILDERNESS STUDY AREA

1. THE STUDY AREA: 59,170 acres

The San Rafael Reef Wilderness Study Area (WSA) (UT-060-029A) is in Emery County, about 18 miles west of Green River, Utah (population 1,048). The study area is about 22 miles long, from north to south, and 6 to 8 miles from east to west. The northern tip of the WSA is adjacent to Interstate Highway 70 (I-70). The eastern boundary of the study area is a portion of the cliff that forms the eastern face of the San Rafael Reef, a highly eroded broad upwarp that is a major geographic feature in central Utah. The western boundary of the WSA is along terrain features, roads, and legal subdivisions (see Map).

The WSA is 1 mile northeast of the Crack Canyon WSA (UT-060-028A) and about 2 miles south of the Mexican Mountain WSA (UT-060-054). The San Rafael Reef WSA contains 55,540 acres of public land administered by the Bureau of Land Management (BLM). An additional 3,630 acres of public land outside the east boundary of the WSA are part of BLM's recommended area, bringing the total area studied to 59,170 acres. There are six State sections (4,029 acres) inheld in the study area (see Table 1).

The study area is on the eastern edge of the San Rafael Swell. The San Rafael Reef is a nearly north-south trending hogback that dips steeply eastward.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	55,540
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	4,029
Total	59,569
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	55,540
BLM (outside the WSA)	3,630
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	59,170
In-holdings (State, private)	4,029
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

SAN RAFAEL REEF WILDERNESS STUDY AREA

The central and northern parts of the WSA are composed mostly of multicolored sandstone mesas, faulted and jointed so as to give a checkerboard appearance. The rest of the study area consists of canyons from 200 to 1,000 feet deep that drain eastward, and domes and vertical fins characteristic of the San Rafael. Fins (i.e., massive rock blades) jut vertically from the desert floor in the northeastern part of the study area. Elevations in the WSA range from 4,800 feet along the eastern base of the Reef to 6,600 feet in the central and northern portions. Vegetation is predominantly pinyon and juniper, covering three-fourths of the area, especially in the inner, higher parts of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan included 39,910 acres of the San Rafael Reef WSA in the San Rafael Reef (north portion) Area of Critical Environmental Concern (ACEC) to protect unique vegetation and scenic values. Special management requirements now in effect within the ACEC include limiting off-highway vehicles (OHVs) to designated roads and trails, closure to oil and gas leasing, proposed withdrawal from locatable mineral entry, and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights. In addition, the majority of the ACEC and WSA has been identified as "primitive"' through the Recreation Opportunity Spectrum (ROS) classification system (ROS-P class). Therefore, most of the WSA is closed to OHV use to manage for ROS-P class.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   59,170 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this study area is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all inholdings and provides additional information on acquisition.

All of the study area meets the naturalness criterion and has outstanding opportunities for primitive recreation. About 99 percent of the study area has outstanding opportunities for solitude.

Special features include scenic, historic, and geologic values. The sawtooth ridge of sandstone on the Reef is a unique landform.

Almost all of the area recommended for wilderness designation is within the San Rafael Reef ACEC and ROS-P class, where restrictions on OHV use, mineral and energy exploration and production, and management for protection of scenic values would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Uranium resources exist in the WSA and there is long-term potential for future development through small mines. Uranium resources exist in the WSA. However, the potential for development is low, due to high exploration and recovery costs. No other significant locatable or leasable mineral production would be foregone. Uranium also may be found in the same geologic formations elsewhere in the vicinity, however, and the San Rafael Reef probably would not be essential for future market needs. No conflicts exist with other resources.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

The entire 59,170-acre study area is considered natural in character. The major imprints surrounding the San Rafael Reef WSA were eliminated by boundary adjustments during the BLM Intensive Wilderness Inventory. What remains are approximately 10 miles of ways and trails, an oil drill site, and several tunnels and associated mining buildings and equipment.

A way that probably resulted from mineral exploration in the first drainage south of Old Woman Wash is about 4 miles long and ends on a bench. It is little used and is substantially unnoticeable. Another way about 2 miles long, south of Arson's Garden, leads to an old drill site. Both the way and drill site are disappearing, although there is some travel on the way.

Several other trails about 3.5 miles in total length exist in the WSA and are in Straight Wash, the first canyon north of Straight Wash, portions of Iron Wash, and the first major canyon north of Temple Wash, on the west side of the Reef. The trails are eroded, making them substantially unnoticeable. Some off-highway vehicle (OHV) travel has occurred in the wash bottoms, but flooding has tended to erase the signs of use. All of these ways, trails, and wash bottoms are within ROS-P class, and are now closed to OHV use by administrative decision in the San Rafael RMP.

Two tunnels and mine shacks in two drainages along the northeast half of the Reef look old enough to be historic and they blend into their primitive environment. Also, an old-fashioned drill rig is near a way north of Ernie Canyon. The way is about a 0.5 mile in length, and both the way and rig are substantially unnoticeable within the study area.

Altogether, these imprints cover about 2,800 acres (less than 5 percent) of the area. The remaining acreage (56,370 acres) is essentially untouched. No surface-disturbing activities have occurred since the wilderness inventory, and naturalness has not been affected.

B. Solitude

In more than 99 percent of the study area (58,578 acres), the opportunities for solitude meet the criteria for outstanding. The remaining 592 acres, less than 1 percent of the WSA, do not meet the standards for outstanding opportunities for solitude.

The many incised drainages through the Reef offer passages for the user to experience seclusion and isolation. The twisting character of the canyons and the 10 to 1,000 foot cliffs effectively shroud lines of sight and suppress sounds for any substantial distance within these canyons. Off-site intrusions and influences are essentially nonexistent within these canyons.

The sandstone knobs, petrified dunes, checkerboarded mesas, and jutting fins in the higher parts of the WSA are intermittently open and provide good vantage points. To the east is the San Rafael Desert, to the west is the mesa of the swell, and to the north and south is the sawtooth ridge of the Reef. Vegetation cover is sparse in some areas and does not effectively screen visitors. The rolling terrain and immensity of the area promote the feeling of seclusion and remoteness.

From specific points within the WSA, several dirt roads and traffic on Highway 24 (3 miles east) and I-70 (adjacent to the north boundary) can be seen outside the WSA. Their observation is not necessarily intruding and may actually, as a comparison, emphasize the remoteness of the users' recreational experience. Within a 0.25 mile of I-70, sounds from traffic are very noticeable and at times intruding. Because of the imposition of these sounds, the opportunity for solitude is less than outstanding in the area. During the spring months the

sounds from OHV activity near the southern boundary of the WSA also disturb the sense of solitude.

C. Primitive and Unconfined Recreation

The entire study area meets the standards for outstanding opportunities for primitive and unconfined recreation because of the unusual topographic character of the WSA, outstanding hiking, rock scrambling, and camping options, the presence of water sources, a rare collectable agate, and other recreation opportunities. Educational groups, rock hounds, and backpackers hike in the canyon drainages through the Reef to observe and study the historic, prehistoric, and geologic qualities.

During the spring holidays, recreationists travel to the desert to enjoy the warm weather. OHV use, the main recreational activity, is concentrated adjacent to the southern portion of the WSA. Due to the restrictive character of the WSA's topography, many of these recreationists explore the area by foot. Opportunities for hiking, backpacking, rock scrambling, art, photography, and scenic viewing are outstanding.

Many isolated pools of water provide contrast to the dry, desolate character of the WSA. The dramatic nature of the Reef's formations with its sheer-walled cliffs, pinnacles, knobs, twisted canyons, colors, and historic and prehistoric remnants all contribute to the quality of recreational experiences.

D. Special Features

The canyons of the WSA expose numerous geologic strata. The upper reaches of the study area provide dramatic views of arches, caves, and narrow, textured passageways within the WSA and of the great upthrust of the San Rafael Reef and its many fins and folds.

Approximately 45 percent (26,626 acres) of the study area is rated outstanding for scenic quality.

The rare grape agate, thought to occur in only a few other places in the country is found in the WSA.

Evidence of past mining activity can be found near the northeastern and southwestern boundaries of the WSA. Shacks, cabins, and mine shafts dot the area, providing a historic flair to the natural surroundings. Evidence of the old Green River to the Hanksville wagon trails also add historic significance to the WSA.

Desert bighorn sheep, a wildlife species associated with wilderness, is found in the WSA. Cougars may occasionally visit the area. Black-footed ferrets and peregrine falcons, listed as endangered species, and an additional nine animal species considered sensitive also may inhabit or use the WSA.

Two plant species, Maguire daisy, (Erigeron maguirei var. maguirei) and Wright fishhook cactus (Sclerocactus wrightiae), listed as endangered species, occur or may occur in the WSA. The Jones cyclodenia,(Cyclodenia humilis var. jonesii), is a threatened species that occurs within the WSA. Also, the Last Chance townsendia,(Townsendia aprica), a threatened species may occur in the WSA. Seven other bird species and five other plant species that are considered sensitive also occur, or may occur, in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this study area would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

SAN RAFAEL REEF WILDERNESS STUDY AREA

The study area is in the Colorado Plateau Province/Ecoregion. The PNV in the area is galleta-threeawn shrubsteppe (35,502 acres), juniper-pinyon woodland (13,885 acres), and saltbush-greasewood (9,783 acres). Juniper-pinyon woodland PNV is well represented in the NWPS nationally and in other BLM study areas both in and outside of Utah, and is represented in one wilderness in Utah. Galleta-threeawn shrubsteppe PNV is not represented at all in the NWPS, however, and saltbush-greasewood PNV is represented in the NWPS in only one designated wilderness, which is in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The study area is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas.

Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	155,224
Juniper-Pinyon Woodland	11	1,401,745	84	2,130,120
Saltbush-Greasewood	1	20,000	17	384,220
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	155,224
Juniper-Pinyon Woodland	1	26,000	53	1,692,313
Saltbush-Greasewood	1	20,000	17	384,220

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,200,505
Provo-Orem, Utah	11	721,793	90	2,727,698

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The San Rafael Reef study area could contribute to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A San Rafael Reef Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres.

There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U.S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. A herd of about 35 wild burros would continue to use part of the WSA, where management actions would continue as at present. Even though there are 6,940 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 16,140 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 64 acres of the WSA following wilderness designation, but this would not affect the over all manageability of the study area. The presence of six State in-holdings (4,029 acres) scattered through the central and southern portions of the study area could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. About 640 acres of the in-held State land is leased for oil, gas, and hydrocarbons and all of the in-holdings are leased for grazing. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in parts of the recommended wilderness.

About 910 acres of public water reserve withdrawals would be compatible with wilderness management and would remain in effect following wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the San Rafael Reef WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., N.D.). Commodities evaluated include uranium, geothermal energy, gypsum, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, petrified wood, and tar sand. The report indicates that within the Carmel Formation, inferred subeconomic resources of about 668,000 tons of gypsum are present in the San Rafael Reef WSA.

The mineral resource potential is high for localized, thin tar sands of variable grade. The resource potential for gypsum on the surface is high in the eastern and southeastern part of the WSA. The eastern and southeastern part of the WSA have high resource potential for uranium and vanadium in the Chinle Formation. The resource potential is low for metals other than uranium and vanadium, including gold and copper. The resource potential for minor, localized sulfur deposits is also low in the WSA. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the eastern and southeastern part of the San Rafael Reef WSA. The resource potential for

carbon dioxide and helium gases is moderate.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, designation of the study area as wilderness would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 100 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $14,293 annually at the end of 30 years. Livestock grazing would continue to contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Up to $115,800 in Federal and State mineral lease revenues would be foregone each year.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 360 inputs specifically addressing this WSA were received from 1,010 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 110 commenters supported wilderness designation for part or all of the WSA, while 453 commenters were opposed. Four hundred and forty-seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA includes wilderness values and that wilderness designation would protect those values and wildlife and curtail OHV use in the area. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would restrict public access and livestock management, harm State and local economies, and cause Federal regional air quality designation to become more restrictive. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the National Park Service (NPS) commented on the Draft EIS for this WSA. The NPS expressed no opinion regarding wilderness designation, but recommended identifying the WSA as a National Natural Landmark.

No comment letters were received on the Final EIS.

There are six State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation of the WSA. The State commented that the WSA is considered to rank highest for wilderness values and low for significance of conflicts compared with other WSAs in the San Rafael Reef. Specific State comments dealt with clarifications in geology and the total acreage figure of the WSA.

The San Rafael Reef study area is in Emery County, Utah. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that wilderness designation would conflict with the Emery County Master Plan and lead to more restrictive standards on air and visual quality that would have a significant adverse impact on future development in the County. The Commission believes that none of the man made sites in the study area qualify as

historical sites and that in-held and adjacent State sections, as well as customary use by the local population, will limit the potential for management of the area as wilderness. The Commission further noted that the area is penetrated by too many roads to qualify as roadless.

SAN RAFAEL REEF WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (59,170 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 64 acres because of uranium exploration and development on valid mining claims and development of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 2,366 acres. Special features would be preserved overall, although Class A scenery could be reduced in quality in disturbed and surrounding areas.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 206 acres of the WSA because of uranium exploration and development and development of access to in-held State lands. These values would be indirectly reduced in quality on up to an additional 11,834 acres. Class A scenery would be reduced in quality in the disturbed and surrounding areas. Future mining and access roads to State in-holdings, and other vehicular use would detract from naturalness and opportunities for solitude and primitive recreation in the WSA. Most of the WSA would remain closed to OHVs..
Impacts on Soils	With implementation of this alternative, soil loss from the WSA would be expected to increase by 1 percent (321 cubic yards per year) over the current rate. This would be 2 percent (643 cubic yards per year) less than with the No Action/No Wilderness Alternative.	Soil loss from the WSA would increase by 3 percent (964 cubic yards per year) over the current rate. There would not be significant secondary offsite effects because the projected disturbance would not be along perennial streams and mitigation would be required.
Impacts on Vegetation	Vegetation types and threatened, endangered, or other special status plant species would be protected by this alternative because projected disturbance would be reduced from 206 acres to 64 acres. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.	Vegetation types and populations of threatened, endangered, or other special status plant species would not be significantly affected because the 206 acres of projected surface disturbance would affect less than 0.4 percent of the WSA. Impacts from OHV use would be minimal because the majority of the area would remain closed to OHVs.

SAN RAFAEL REEF WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (59,170 Acres)	No Action/No Wilderness
Impacts on Mineral and Energy Exploration and Production	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Although some production would occur, opportunities for production of an unknown portion of the uranium in the WSA would be foregone. No other significant locatable or leasable mineral production would be foregone because the probability of development is low even if the area is not designated wilderness.	Mineral and energy exploration and production would not be affected because mineral leasing, location of mining claims and mineral developments would not be restricted for the protection of wilderness values. In the ACEC and ROS-P class, plans of operation would continue to be required on all valid claims, no oil and gas leases would be issued, and the area would be proposed for withdrawal from locatable mineral entry.
Impacts on Wildlife Habitat and Populations	Approximately 0.1 percent (64 acres) of the wildlife habitat would be disturbed. Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term.	About 0.4 percent (206 acres) of the wildlife habitat in the WSA would be directly disturbed. OHV use would not be allowed. Therefore, wildlife habitat and populations including special status species would not be significantly affected.
Impacts on Visual Resources	VRM class objectives would not be met on 0.1 percent (64 acres) of the WSA because of uranium exploration and development and construction of access to in-held State lands. Visual quality would be reduced on the disturbed and surrounding areas but would be preserved on the remainder of the WSA.	VRM class objectives would not be met on 0.4 percent (206 acres) because of uranium exploration and development and construction of access roads to State in-held lands. Visual quality would be reduced on the disturbed areas and on surrounding view areas.
Impacts on Cultural Resources	Very little impact to cultural resources is expected under this alternative because potential disturbance would be reduced from 206 to 64 acres. Cultural resource management may be limited in scope and execution in order to preserve other wilderness values.	Impacts due to surface disturbance are expected to be minimal because only 0.4 percent (206 acres) of the WSA would be disturbed and mitigation would be required. Cultural resource management would continue without regard for protection of other wilderness values.

SAN RAFAEL REEF WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (59,170 Acres)	Alternatives: No Action/No Wilderness
Impacts on Recreational Use	Primitive recreational values in the WSA would be protected and primitive use would increase at a rate of 2 to 7 percent annually over the next 30 years. The quality of primitive recreational use would be directly reduced on 0.1 percent (64 acres) and indirectly reduced on up to additional 4 percent (2,366 acres) of the WSA.	Primitive recreation values would continue to be protected, since most of the area would remain closed to OHVs. The quality of primitive recreation would be reduced on and near areas where other surface-disturbing activities occur. This could occur directly on 206 acres and indirectly on up to 20 percent (11,834 acres) of the WSA. Primitive recreational use would increase by 2 to 7 percent annually over the next 30 years.
Impacts on Local Economic Conditions	Over the long term, wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 100 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $14,293 annually at the end of 30 years. Livestock grazing would continue to contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Up to $115,800 in Federal and State lease revenues would be foregone each year.	Present economic conditions would not be affected. Locatable mineral activity could increase employment in Emery County by 3.0 percent (200 jobs) by the year 2010. Recreation-related expenditures would contribute up to $14,239 annually to the local economy by the year 2020. Livestock grazing would contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Present and future oil and gas leases could contribute up to $115,800 annually in Federal and State lease revenues.

a The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

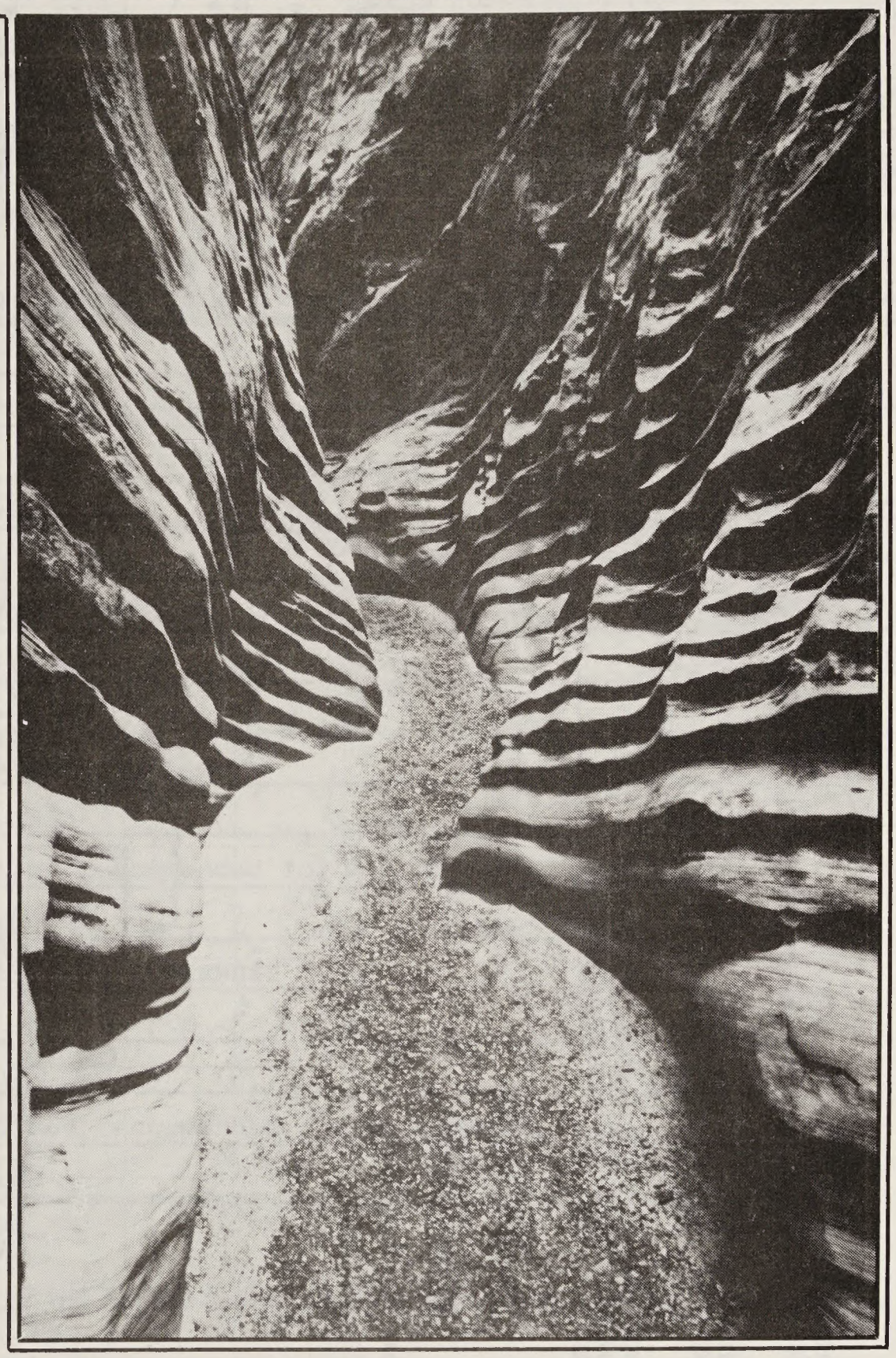
SAN RAFAEL REEF WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation a

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 23 S., R. 12 E., Sec. 2	639.92		State	State	No	Exchange		$2,000
T. 23 S., R. 12 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 23 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 23 S., R. 13 E., Sec. 32	639.00		State	State	No	Exchange		$2,000
T. 24 S., R. 12 E., Sec. 2	830.44		State	State	No	Exchange		$2,000
T. 24 S., R. 12 E., Sec. 32	640.00		State	State	No	Exchange		$2,000

a The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Crack Canyon WSA



Crack Canyon WSA Proposal
UT-060-028A

RECOMMENDED FOR WILDERNESS

NONE — RECOMMENDED FOR NON-WILDERNESS

LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY

STATE LAND WITHIN WSA BOUNDARY

NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

N

ELEVATION EXPRESSED IN METERS

BOUNDARY VARIATION

T. 24 S.

T. 25 S.

T. 26 S.

R. 9 E.

R. 10 E.

R. 11 E.

CRACK CANYON WSA

October 1991

CRACK CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 25,335 acres

The Crack Canyon Wilderness Study Area (WSA) (UT-060-028A) is in Emery County, about 15 miles north of Hanksville, Utah, and directly west of Goblin Valley State Park. The study area is oriented along a nearly east-west axis, and extends for about 16 miles from northeast to southwest and is as much as 3 miles from northwest to southeast. The WSA includes a portion of the southeastern San Rafael Reef, where the Reef trends nearly east-west. Roads and State lands define the boundaries of the WSA (see Map).

Approximately 13 miles of county, BLM, and unmaintained roads are used as boundaries, as well as 18 miles of 9 State section lines. The San Rafael Reef WSA (UT-060-029) is about 1 mile northeast of this WSA, and the Muddy Creek WSA (UT-060-007) is 1 mile northwest of the western end. The Crack Canyon WSA contains 25,315 acres of public land administered by the Bureau of Land Management (BLM). An additional 250 acres of public land outside the east boundary of the WSA are part of BLM's recommended area and 230 acres of the original inventory unit were deleted, bringing the total area studied to 25,335 acres.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	25,315
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	640
Total	25,955
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	25,315
BLM (outside the WSA)	20
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	25,335
In-holdings (State, private)	640
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

CRACK CANYON WILDERNESS STUDY AREA

There is one State section (640 acres) inheld in the study area (see Table 1).

The study area includes colorful badlands of eroded soils, cliffs, and rock monuments, including fins which form a sawtooth sandstone ridge, and knobs, caves, and arches. Canyons from 200 to 500 feet deep cross the Reef and the WSA, narrowing in places to clefts with bottoms constantly in shadow. Elevations range from 4,700 feet along the southern margin to 6,000 feet in the northeastern part of the WSA. Desert shrub and saltbush are the dominant vegetation, but most of the WSA is barren.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the BLM Utah Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 22,640 acres of the Crack Canyon WSA in the San Rafael Reef (south portion) Area of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the ACEC include limiting off-highway vehicles (OHVs) to designated roads and trails and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   25,335 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this study area is to designate the entire area as wilderness. Designation of the entire area is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional inholding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the study area meets the naturalness criterion and has outstanding opportunities for primitive recreation. More than 99 percent of the study area has outstanding opportunities for solitude. Scenic, geologic, archaeological, and wildlife features and values are exceptional. The narrow, incised, twisting canyons are the most notable visitor attractions.

Uranium exploration has occurred in the area in the past and uranium resources may have long-term future development potential. Uranium deposits may be found in the same geologic formations near the WSA, however, and the Crack Canyon area probably would not be significant for future supplies of uranium.

BLM recommends that the boundary along the south side of the Temple Mountain Road be set back approximately 200 feet to the south side of South Temple Wash, (see Map) to allow traditional camping use to continue and for road maintenance.

Use of vehicles is popular in the bottoms of narrow canyons in the WSA. Wilderness values take precedence over off-highway vehicle (OHV) use at Chute Canyon and Wild Horse Creek.

Approximately 22,640 acres of the area recommended for wilderness designation are in the San Rafael Reef ACEC where restrictions on OHVs and management for protection of scenic values would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

The BLM notes that designation of the WSA could result in restrictions on future water consumptive developments on Muddy Creek and its tributaries, with resultant impacts on the economy of Emery County. Because of the uncertain nature of the impacts, BLM recommends that the WSA be designated wilderness with special provisions for protection of potential water uses upstream of the

WSA. No other significant conflicts exist with other resource uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Imprints in the WSA cover a total of about 506 acres (2 percent of the WSA). The remaining 24,829 acres can be considered pristine. The entire 25,335 acres meet the criterion of naturalness for areas under wilderness review.

The major imprints surrounding the Crack Canyon WSA were excluded during the BLM Intensive Wilderness Inventory in 1980. Of note are a 0.5 mile of fence, approximately 2.25 miles of ways, a stock reservoir, one water well, and an exploratory well.

The fence, stock reservoir, and water well are all used for livestock purposes, and are located along the southern boundary of the WSA. They are substantially unnoticeable and do not detract from the area's naturalness. A well drilled by Union Carbide in the 1950's is located adjacent to the northern boundary near Temple Mountain, and is also substantially unnoticeable.

Ways totaling approximately 2.25 miles area located near Hunt Draw, Muddy Creek, and between Wild Horse Creek and Crack Canyon. Motorcycling and some 4-wheel vehicular traffic occurs on these ways. Flooding and erosional processes are slowly eliminating these imprints in Hunt Draw and Muddy Creek. Motorcycle use on the way between Crack Canyon and Wild Horse Creek however, consists of a distinct 3-foot to 4-foot wide trail.

No surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

In over 99 percent of the study area (25,300 acres), the opportunities for solitude are considered outstanding during most of the year.

The many incised drainages through the San Rafael Reef provide passages for users to experience seclusion and isolation. The twisting canyons and up-to-1,000-foot cliffs effectively shorten lines of sight and suppress sounds. Off-site intrusions and influences are virtually nonexistent within the canyons.

The higher parts of the WSA, consisting of sandstone knobs, solidified dunes, and the San Rafael Reef's jutted fins, are generally open and provide great vantage points for viewing the surrounding desert to the east, the badlands of Robber's Roost to the south, and the inner drainage system of the San Rafael Swell to the north-northwest. Vegetation cover is limited and does not effectively screen visitors, but the rolling, incised terrain fosters the feeling of seclusion. The expansiveness of the surroundings provides the user with a feeling of remoteness. From specific points within the WSA, the traffic on Highway 24 (8 miles east) and within Goblin Valley State Park may be seen. These outside elements do not necessarily intrude upon the visitor's solitude. During the Easter and Memorial Day weekends, when OHV use adjacent to the WSA is greatest, solitude may be less than outstanding. Motorcycle riding in two canyons of the study area has a negative effect on solitude when it conflicts with primitive recreation.

C. Primitive and Unconfined Recreation

Several outstanding recreation opportunities allow the entire study area (25,335 acres) to meet the outstanding criterion set for areas under wilderness review.

Educational groups use the WSA. Their trips involve hiking and backpacking the intricate canyon drainages through the Reef.

Historic, prehistoric, and geologic features in the area are observed and studied and survival techniques are taught.

During the spring and early fall, recreationists flock to the desert to enjoy the warm weather. OHV use is their main recreational activity, and many use the area adjacent to the WSA. Due to the restrictive character of the terrain, recreationists explore the WSA mostly by foot. Outstanding opportunities for hiking, backpacking, rock scrambling, photography and scenic viewing await these explorers.

Muddy Creek is used for tubing, including negotiating rapids, during the early spring when high water is present. During the drier periods, the drainage is used for hiking and motorcycling.

After rain storms, many isolated pools of water provide an element of surprise and contrast to the dry, desolate character of the WSA. The dramatic nature of the Reef with its sheer-walled cliffs, pinnacles, knobs, twisted canyons, valleys of color, and prehistoric remnants all contribute to a high quality recreational experience.

D. Special Features

The canyons of the WSA expose geologic strata and arches, caves, and narrow, twisted and textured passageways. Many of the features are unique to the San Rafael Reef. The upper reaches provide dramatic views of the San Rafael Reef and its many fins and folds.

The entire WSA is rated outstanding for scenic quality.

The three archaeological sites that have been recorded include small pictograph or petroglyph panels and small habitations in rock shelters.

Considerable evidence of old mining activity surrounds the north, west, and south boundaries of the WSA. Shacks, cabins, and mine shafts adjacent to the WSA provide striking contrast to the color, beauty, and magnitude of the WSA and surrounding land.

Cougar and desert bighorn sheep, which are wildlife species associated with wilderness, may occasionally visit the WSA. In 1983 a group of bighorn sheep was seen just northwest of the WSA. Bighorn sheep occupied the area before uranium mining occurred. There are also wild horses within the WSA. Black-footed ferrets, peregrine falcons, and bald eagles, all of which are listed as endangered species, and nine additional animal species considered sensitive, may occur in or near the WSA.

Two endangered plant species, Maguire daisy (Erigeron maguirei var. maguirei) and Wright fishhook cactus (Sclerocactus wrightiae) may occur near or within the WSA. Two threatened species, the Jones Cycladenia (Cycladenia humilis var. jonesii) and the Last Chance Townsendia (Townsendia aprica), and five other plant species that are considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is galleta-threeawn shrubsteppe (7,614 acres) and saltbush-greasewood (17,721 acres).

The saltbush-greasewood PNV is represented in the NWPS only in Utah. The galleta-threeawn shrubsteppe PNV is not represented in the NWPS at all. Both types of PNV are represented in other BLM study areas, but in Utah only.

This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	183,112
Saltbush-Greasewood	1	20,000	17	376,282
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	183,112
Saltbush-Greasewood	1	20,000	17	376,282

Source: BLM File Data

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of the population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Crack Canyon WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Crack Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres.

There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U.S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,234,340
Provo-Orem, Utah	11	721,793	90	2,761,533

Source: BLM File Data

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. A herd of about 5 to 15 head of wild horses would continue to use part of the WSA, where management actions would continue as at present.

There are no mineral leases in the WSA, and new leases would not be issued. There are 7,440 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 28 acres in the northwest portion of the WSA following wilderness designation, but this would not affect the overall manageability of the study area. The presence of a State in-holding (640 acres) in the study area could create additional manageability problems because BLM would be required to provide reasonable access to State land and would have no control over activities on State land. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in a small portion of the recommended wilderness.

About 122 acres of public water reserve withdrawals would be compatible with wilderness management and would remain in effect following wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the Crack Canyon WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., N.D.). Commodities evaluated include uranium, geothermal energy, gypsum, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, sulfur, petrified wood, and tar sand.

The Crack Canyon WSA contains parts of the Delta, Temple Mountain, and Little Wild Horse mining districts. Between 1950 and 1973, about 472 tons of uranium oxide were produced from 10 mines in districts within or adjacent to the study area, and about 414 tons were produced from 2 mines within the study area.

The mineral resource potential is high for localized, thin tar sands of variable grade in the WSA. The report indicates that within and near the WSA is about 221,000 tons of identified subeconomic uranium and vanadium resources. An identified subeconomic resource of about 20 million tons of gypsum is in the Summerville Formation in the WSA. The resource potential for gypsum on the surface is high in the southern and southeastern part of the WSA. The Crack Canyon WSA has high resource potential for uranium and vanadium in the Chinle Formation. The resource potential for uranium and vanadium in the Morrison Formation is low in the southern part of the WSA. The resource potential is moderate for oil and gas, geothermal energy, and carbon dioxide and helium gases. The resource potential is low for metals other than uranium and vanadium, including gold and copper. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the WSA, and is also low for bentonite with minor zeolite in the southernmost part of the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, the recommended wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Approximately 80 fewer jobs would be provided by locatable mineral activities with this alternative. This is

equivalent to about 1.2 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $18,040 annually at the end of 30 years. Livestock grazing would continue to contribute $14,540 annually in livestock sales and $1,120 in Federal revenues. Up to $50,670 in Federal and State lease revenues would be foregone each year.

An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on Muddy Creek and its tributaries upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 317 inputs specifically addressing this WSA were received from 973 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional input or signature. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 70 commenters supported wilderness designation for part or all of the WSA, while 452 commenters were opposed. Four hundred and fifty-one commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features of the WSA. The majority of those commenting in favor of wilderness were from other states and rural Utah. Of particular concern was the need to protect the wilderness values in the WSA from OHV use and preserve the area for future generations.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict public access and livestock management, harm local and State economies, cause a Federal regional air quality designation to be more restrictive, and commented that enough wilderness exists already and there is no need for more. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM, commented on the Draft EIS for this WSA. The USBM expressed no opinion regarding wilderness designation but stated that BLM underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There is one section (640 acres) of State land within the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding this WSA. The State commented that the WSA has both moderate wilderness values and conflicts compared to other WSAs in the San Rafael Swell Region. The State cited uranium resources, high OHV use, and potential water developments as the major conflicts, and noted that there are also wilderness values and wildlife habitat in the WSA which would benefit from wilderness management. Specific State comments dealt with an error in the geology section of the EIS and noted that designation of this area as a WSA in the late 1970's precluded adequate evaluation of the uranium potential.

The Crack Canyon study area is in Emery County, Utah. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that the

shape of the WSA is not conducive to those qualities sought in wilderness areas and wilderness designation could lead to more restrictive standards on air and visual quality that would have a significant adverse impact on present power generation and mining operations as well as future development in the County.

CRACK CANYON WSA

Table 4
Comparative Summary of Impacts of Alternative[a]

Issue Topic	Alternatives: Recommendation All Wilderness (25,335 Acres)	Alternatives: No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 29 acres because of uranium exploration and development on valid mining claims and construction of access to State in-held lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 760 acres. Special features would be preserved overall, although Class A scenery would be reduced in quality in the disturbed and surrounding areas.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 94 acres because of uranium exploration and development and construction of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 2,533 acres. Special features would generally not be significantly affected by mineral-related disturbance, although Class A scenery would be reduced in quality in the disturbed areas. Vehicular use of ways, future mining access roads, and other vehicular access would detract from naturalness and opportunities for solitude and primitive recreation in the WSA. OHV use would also disturb wildlife associated with wilderness.
Impacts on Vegetation	Vegetation types and threatened, endangered, and other special status plant species would be protected by this alternative because the potential for surface disturbance would be reduced from 94 to 29 acres and OHV use would be eliminated. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.	Populations of threatened, endangered, or other special status plant species would not be significantly affected. The 94 acres of projected surface disturbance would affect less than 0.4 percent of the WSA. OHV use would be limited to designated roads and trails, which would avoid populations of threatened, endangered, or other special status species.
Impacts on Water Resources	In the long term, future water diversions and new consumptive uses in the Muddy Creek system upstream of the WSA may be restricted or precluded. Potential upstream uses include irrigation, cooling water for coal-fired generation of electricity, coal mining, and municipal use.	This alternative would not significantly alter present or future water quality or uses. Only 0.4 percent (94 acres) of the WSA would be disturbed and there would be no restrictions imposed by wilderness management.
Impacts on Mineral and Energy Exploration and Production	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Although some production would occur, an unknown portion of the uranium in the WSA would be foregone. No other significant locatable or leasable mineral production would be foregone because the probability of development is low even if the area is not designated wilderness.	Mineral and energy exploration or production would not be significantly affected because mineral leasing, location of mining claims, and mineral development would not be restricted for protection of wilderness values.

Table 4 (Continued)
Comparative Summary of Impacts of Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (25,335 Acres)	Alternatives: No Action/No Wilderness
Impacts on Wildlife Habitat and Populations	Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term. Approximately 0.1 percent (29 acres) of the wildlife habitat in the WSA would be disturbed.	About 0.4 percent (94 acres) of the wildlife habitat in the WSA would be directly disturbed and OHV use would continue. Populations of bighorn sheep, raptors, and special status species could be affected. Monitoring and enforcement of protective measures would be necessary.
Impacts on Cultural Resources	Very little impact to cultural resource is expected under this alternative because potential disturbance would be reduced from 94 to 29 acres and OHV use would not be allowed. Cultural resource management may be limited in scope and execution due to wilderness management in order to preserve other wilderness values.	All sites, including three recorded sites, would continue to be protected under existing laws. Inadvertent loss or damage to archaeological sites may occur due to surface development and/or continued OHV use. Impacts from development would be minimal because only 0.4 percent of the WSA would be disturbed and mitigation would be required. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resource management would continue without regard for protection of other wilderness values.
Impacts on Recreational Use	Primitive recreational opportunities would be protected, and primitive recreational use would increase at a rate of 2 to 7 percent annualy over the next 30 years. The quality of primitive recreational use would be directly reduced on 29 acres and indirectly reduced on up to an additional 3 percent (760 acres) of the WSA. Up to 8,720 visitor days of motorized use per year would be precluded at the end of 30 years. About 75 percent of the present recreational use is based on vehicular access and overall recreational use would decline following wilderness designation.	The quality of primitive recreation would be reduced on and near OHV-use areas and areas where other surface-disturbing activities occur. This could occur directly on 94 acres and indirectly on up to 10 percent (2,533 acres) of the WSA. Both primitive and motorized recreational use would increase by 2 to 7 percent annually over the next 30 years.
Impacts on Local Economic Conditions	Over the long term, wilderness designation would cause a slight change in local economic conditions from those what would occur with the No Action/No Wilderness Alternative. Approximately 80 fewer jobs would be provided by locatable minerals activities with this alternative. This is equivalent to about 1.2 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $18,040 annually at the end of 30 years. Livestock grazing would continue to contribute $14,540 annually in livestock sales and $1,120 in Federal revenues. Up to $50,670 in Federal and State lease revenues would be foregone each year. An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on Muddy Creek and its tributaries upstream of the WSA.	Present economic conditions would not be affected. Locatable mineral activity could increase employment in Emery County by 2.4 percent (160 jobs) by the year 2010. Recreation-related expenditures could contribute up to $53,972 annually to the local economy by the year 2020. Livestock grazing would continue to contribute $14,540 annually in livestock sales and $1,120 in Federal revenues. Future oil and gas leases could generate up to $50,670 annually in Federal and State revenues.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

CRACK CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

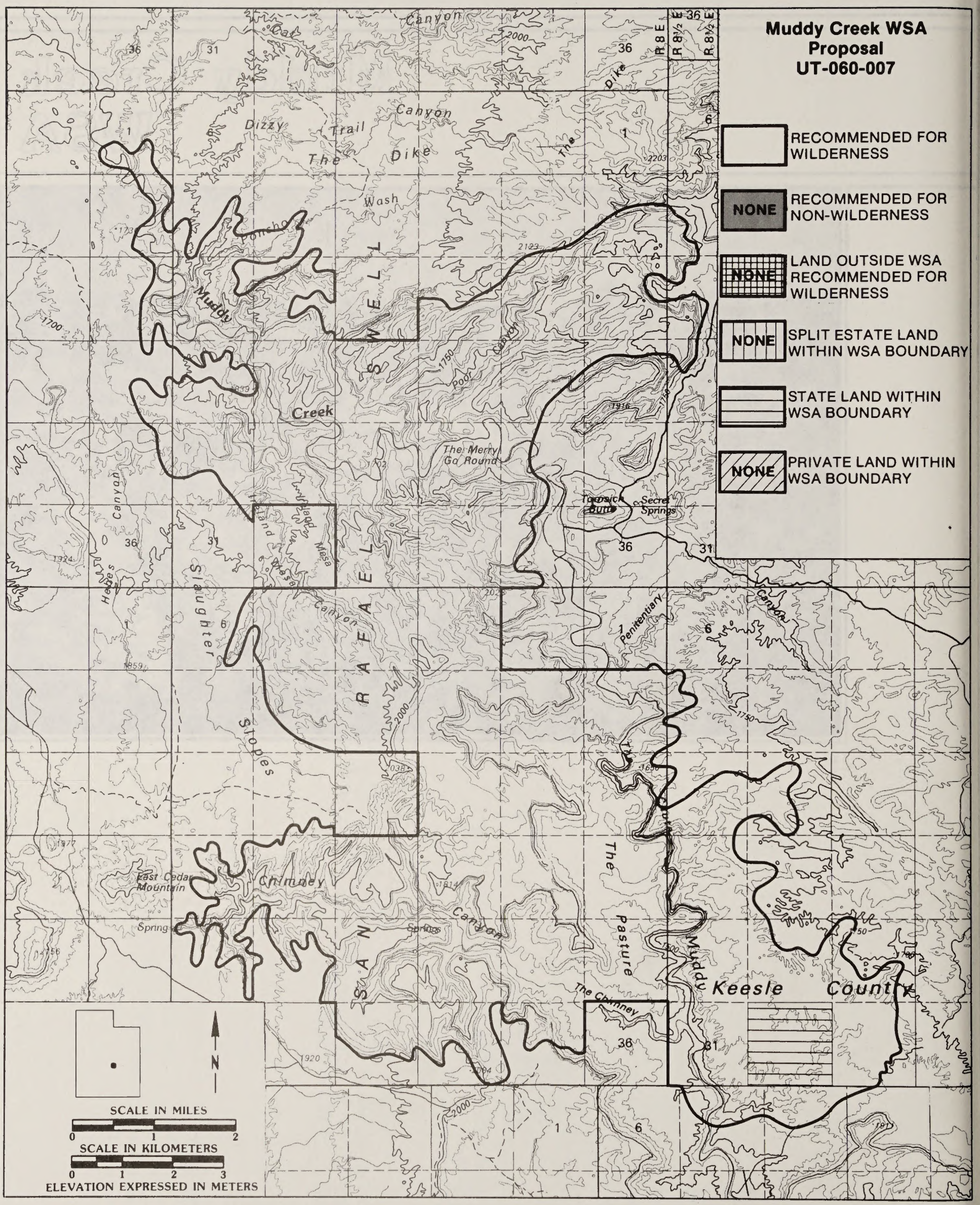
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 25 S., R. 11 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Muddy Creek WSA



MUDDY CREEK WSA



MUDDY CREEK WILDERNESS STUDY AREA

1. THE STUDY AREA: 31,400 acres

The Muddy Creek Wilderness Study Area (WSA) (UT-060-007) is in Emery County, about 30 miles by road south of Emery, Utah (population 372). The WSA is of irregular shape, about 10 miles long from north to south and as much as 6 miles from east to west. Sinuous boundaries along roads, breaks in terrain, and the edges of State sections define the WSA (see Map). The study area is 1 mile northwest of the western end of the Crack Canyon WSA (UT-060-028A) and 5 to 6 miles south of the Devils Canyon WSA (UT-060-025).

The WSA contains 31,400 acres of public land administered by the Bureau of Land Management (BLM). There is one State section (640 acres) inheld within the WSA (see Table 1).

The WSA includes a portion of the San Rafael Reef. Muddy Creek, a tributary of the Dirty Devil River to the south, flows east across the northern portion of the WSA then south through the eastern portion, and has cut a deep canyon through the study area. The south-central portion of the WSA consists of step-like mesas.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	31,400
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	640
Total	32,040
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	31,400
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	31,400
In-holdings (State, private)	640
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The southern part of the study area is a mesa, bisected by Muddy Creek Canyon, and is referred to as "The Pasture" west of the canyon and "Keesle Country" east of the canyon. Elevations in the WSA range from 5,000 feet on the canyon floors to 7,000 feet on the upper parts of the higher mesas. Pinyon, juniper, and desert shrub are the predominant types of vegetation, but plant cover in the WSA is generally sparse.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 13,690 acres of the Muddy Creek WSA in the Muddy Creek Area of Critical Environmental Concern (ACEC) to protect scenic and historic values. Special management requirements now in effect within the ACEC include limiting off-highway vehicles (OHVs) to designated roads and trails and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights. In addition, all of the ACEC and WSA has been identified as "primitive" through the Recreational Opportunity Spectrum (ROS) classification system (ROS-P class). Special management conditions to protect this class include closing the ACEC and WSA to OHV use.

2. RECOMMENDATION AND RATIONALE:
   31,400 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the WSA meets the naturalness criterion and has outstanding opportunities for both solitude and primitive recreation. The deeply entrenched canyons are steep and rugged being accessible from the higher country in only a few spots. Special features include scenic, geologic, ecological (wild horses), and archeological resources. Muddy Creek, a perennial stream which flows in the area for about 20 miles, is a notable attraction.

All of the area recommended for wilderness designation is in the Muddy Creek ACEC and ROS-P class where restrictions on OHVs and management for protection of scenic values would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Uranium mining has occurred adjacent to the WSA and exploration has been conducted in the study area. There is a high potential for a large tonnage of uranium ore in the WSA, but the ore bodies are thought to be scattered and small to moderate is size. No other significant locatable or leasable mineral production would be foregone. Uranium may be found in the same geological formations elsewhere in the region, however, and the Muddy Creek area probably would not be essential to meet future market needs.

The BLM notes that designation of the WSA could result in restrictions on future water consumptive developments on Muddy Creek and its tributaries, with resultant impacts on the economy of Emery County. Because of the uncertain nature of the impacts, BLM recommends that the WSA be designated wilderness with special provisions for protection of potential water uses upstream of the WSA.

No significant conflict exists with other resource uses.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

Human imprints in the WSA altogether cover approximately 2 percent (628 acres) of the WSA. The remaining acreage (30,772 acres) could be considered unspoiled in character. All 31,400 acres meet the naturalness criterion for areas under wilderness review.

The major imprints surrounding the Muddy Creek WSA have been excluded during the boundary determination process. What remains of note are two ways, the Muddy Creek range trail, an airstrip, two cabin structures, an old vehicle, and two mine shafts.

An old way, approximately 7 miles long, follows the cliff contours through the Pasture and into the canyon drainage of the Chimney. A cut through red mudstone is severely eroded, making passage along the way possible only by foot or horseback. The way is more visible in some parts than in others. In general, it has become a useful route that blends well with its surroundings. Another way, extending approximately a 0.25 mile into the northeastern boundary, was developed without authorization in 1983. The route has been reclaimed and is now unnoticeable. Both of these ways are within ROS-P class, and are closed to OHV use by administrative decision in the San Rafael RMP.

Associated with the way leading into the canyon of the Chimney are an abandoned airstrip, two cabin structures near a spring, and an old station wagon buried in the wash. The airstrip is near the wash bottom on level, wide-open terrain. The airstrip is eroded, and sparse vegetation is returning. One old cabin and a chicken coop are near a spring about 1 mile west of the airstrip. Halfway between the strip and cabins is the old station wagon, buried to the roof in the wash.

The Muddy Creek range trail in the northwestern corner of the WSA is used by livestock and wild horses for access to the Muddy Creek drainage.

Two mine shafts are adjacent to the WSA's northeastern boundary. Several other mining shafts are located in the surrounding area.

No surface-disturbing activities have occurred since the wilderness inventory.

B. Solitude

All in all, the entire Muddy Creek WSA offers outstanding opportunities for solitude.

The main canyons and rugged remote terrain provide many miles with opportunities for users to experience isolation. Steep cliffs, narrow passages, and broken terrain effectively shorten lines of sight and suppress sounds for substantial distances within these canyons. Off-site intrusions and influences are almost nonexistent within the canyons.

In the higher parts of the WSA, above the canyon drainages, the rough and broken terrain provides vantage points for views of volcanic intrusions to the west and south and of erosional patterns of the San Rafael Swell. To the north and east off-site intrusions are essentially nonexistent when viewed from these vantage points. Vegetation is limited and does not effectively screen visitors, but the terrain allows for separation and the feeling of seclusion. Expansive views of the natural surroundings give the feeling of remoteness.

C. Primitive and Unconfined Recreation

All 31,400 acres of the WSA meet the outstanding recreation criterion set for areas under wilderness review.

Tubing and kayaking of wild, small, desert rivers is becoming a popular recreation activity. The Muddy Creek drainage has been explored by a small number of floaters, and inquiries about the area have increased in recent years.

The river offers two different adventures during a short floating season. One takes the floaters down an open, twisting canyon segment. The second involves some technical maneuvering through a deep narrow passage with rapids and a relatively swift current.

Hiking, backpacking, and horseback riding are other recreational opportunities available in the WSA. The rugged and remote character of the area, red-walled cliffs, pinnacles, knobs, isolated tracts of land, arches, and archaeologic remnants all contribute to making these activities high-quality recreational experiences. The striking scenery also makes outstanding opportunities for sightseeing, photography, and artistic endeavors.

D. Special Features

The canyons of the WSA expose geologic strata and cliffs, knolls, alcoves, caves, and arches. The upper reaches provide dramatic views of the twisted and carved character of the area, surrounded by the volcanic evidence and

upthrust rock structures. The Chute is a good example of the unusual erosional pattern of a drainage through some of the oldest formations exposed in the San Rafael Swell. The entire WSA is rated outstanding for scenic quality.

The archaeological values of the WSA are unknown, but scattered evidence has been found by recreationists and ranchers along the Muddy Creek drainage. Remnants of cowboy camps and mining activities of the 1940s are also present in several places of the WSA and might be historic in value. These features have not been evaluated.

Two herds of wild horses frequent the WSA in the west, north, and east portions. The herds range from 7 to 15 horses.

Cougar, a wildlife species associated with wilderness, may occasionally visit the area. Black-footed ferrets, peregrine falcons, and bald eagles, all listed as endangered species, and nine additional animal species considered sensitive may occur in or near the WSA.

Two plant species, Maguire daisy, (Erigeron maguirei var. maguirei) and Wright fishhook cactus (Sclerocactus wrightiae), which are listed as endangered, may be found near or within the WSA. Two threatened species, the Jones cycladenia (Cycladenia humilis var. jonesii) and the Last Chance townsendia (Townsendia aprica), and five additional plant species that are considered sensitive also may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is galleta-threeawn shrubsteppe (9,448 acres) and saltbush-greasewood (21,952 acres).

The galleta-threeawn shrubsteppe PNV is not represented at all in the NWPS.

The saltbush-greasewood PNV is represented in the NWPS in one wilderness, which is in Utah.

Both PNV types are represented in other BLM study areas, all of which are in Utah.

This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	181,278
Saltbush-Greasewood	1	20,000	17	372,051
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	181,278
Saltbush-Greasewood	1	20,000	17	372,051

Source: BLM File Data

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and the Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Muddy Creek WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,228,275
Provo-Orem, Utah	11	721,793	90	2,755,468

Source: BLM File Data.

A Muddy Creek Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U.S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA can be managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. A herd of about 7 to 15 head of wild horses would continue to use part of the WSA, where management actions would continue as at present.

There are no mineral leases in the WSA, and new leases would not be issued. There are 3,340 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 12 acres in the northeast and southern portions of the WSA following wilderness designation, but this would not affect the overall manageability of the study area. The presence of a State in-holding (640 acres) in the study area could create additional manageability problems because BLM would be required to provide reasonable access to State land and would have no control over activities on State land. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in a small portion of the southeast corner of the recommended wilderness.

A 40-acre public water reserve withdrawal would be compatible with wilderness management and would remain in effect following wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the Crack Canyon WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., N.D.). Commodities evaluated include uranium, geothermal energy, gypsum, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, sulfur, petrified wood, and tar sand.

The mineral resource potential for localized, thin tar sands of variable grade is high in the WSA. The report indicates that within the Carmel Formation, inferred subeconomic resources of about 11 million tons of gypsum are in the Muddy Creek WSA. The resource potential for gypsum on the surface is high in the western part of the study area. The western part of the WSA has high resource potential for uranium and vanadium in the Chinle Formation. The resource potential is moderate in the WSA for oil and gas, geothermal energy, and for carbon dioxide and helium gases. The resource potential is low for metals other than uranium and vanadium, including gold and copper. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the western part of the Muddy Creek WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, the recommended wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 40 fewer jobs would be provided by locatable mineral activities. Recreation-related expenditures would not be affected because present use is mainly primitive and would continue to increase by 2 to 7 percent per year. The potential for commercial recreation use and resulting Federal revenues (currently $30 annually) would increase. Livestock grazing sales and Federal revenues would continue. Up to $20,560 in Federal and State mineral lease revenues would be foregone each year.

An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on Muddy Creek and its tributaries upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 384 inputs specifically addressing this WSA were received from 913 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 140 commenters supported wilderness designation for part or all of the WSA, while 443 commenters were opposed. Three hundred and thirty commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values perceived to be in the WSA. The majority of those commenting in favor of wilderness were from other states and from urban Utah. Of particular concern was the need to protect wilderness values.

Those opposing wilderness were concerned that wilderness would prohibit mineral exploration and development, restrict public access and livestock management operations, result in more restrictive Federal air quality standards for the region, and would harm local and State economies. Wilderness was regarded as incompatible with multiple use. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM expressed no opinion regarding wilderness designation, but stated that BLM underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There is one section of State land (640 acres) within the WSA. The State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation of the WSA. The State commented that designation of this area as a WSA in the late 1970s precluded adequate evaluation of uranium potential. The State also commented that the WSA has moderate wilderness values and conflicts compared to other WSAs in the San Rafael Swell Region. The major conflicts are with mineral values, uranium, gypsum resources, and potential water development.

MUDDY CREEK WILDERNESS STUDY AREA

The Muddy Creek WSA is in Emery County, Utah. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission commented that wilderness designation could lead to more restrictive standards on air and visual quality and combined with Federal Reserved Water Rights on Muddy Creek, would have a significant adverse impact on the economy of Emery County. The Commission also noted that State lands adjacent to the WSA compromise the potential for long term wilderness management. Another concern of the County is the potential for restrictions on motorized access to conduct search and rescue operations following wilderness designation, and the liability it would place on the county.

MUDDY CREEK WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives: Recommendation All Wilderness (31,400 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 12 acres because of uranium exploration and development on valid mining claims and development of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 942 acres. Special features would be preserved overall, although Class A scenery could be reduced in quality in disturbed and surrounding areas.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 42 acres of the WSA because of uranium exploration and development and development of access to in-held State lands. These values would be indirectly reduced in quality on up to an additional 3,140 acres. Class A scenery would be reduced in quality in the disturbed and surrounding areas.
Impacts on Vegetation	Vegetation types and threatened, endangered, or other special status plant species would be protected by this alternative because projected disturbance would be reduced from 42 acres to 12 acres. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.	Vegetation types and populations of threatened, endangered, or other special status plant species would not be significantly affected because the 42 acres of projected surface disturbance would affect only 0.1 percent of the WSA. There would not be impacts on vegetation from OHVs because the area would continue to be closed to OHVs.
Impacts on Water Resources	Water quality would receive additional protection because the potential for surface disturbance would be reduced. In the long term, future water diversions and new consumptive uses in the Muddy Creek system upstream of the WSA may be restricted or precluded. Potential upstream uses include irrigation, cooling water for coal-fired generation of electricty, coal mining, and municipal use.	This alternative would not significantly alter present or future water quality or uses. Only 0.1 percent (42 acres) of the WSA would be disturbed and there would be no restrictions on water use, imposed by wilderness management.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (31,400 Acres)	Alternatives: No Action/No Wilderness
Impacts on Mineral and Energy Exploration and Production	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Although some production would occur, opportunities for production of an unknown portion of the uranium in th eWSA would be foregone. No other significant locatable or leasable mineral production would be foregone because the probability of development is low even if the area is not designated wilderness.	Mineral and energy exploration and production would not be affected because mineral leasing, location of mining claims and mineral developments would not be restricted for the protection of wilderness values.
Impacts on Wildlife Habitat and Populations	Approximately 0.04 percent (12 acres) of the wildlife habitat would be disturbed. Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term.	Only about 0.1 percent (42 acres) of the wildlife habitat in the WSA would be directly disturbed and mitigation would be required. OHV use would not be allowed. Therefore, wildlife habitat and populations including special status species would not be significantly affected. However, small portions of potent habitat for peregrine falcon and black-footed ferret could become unsuitable for reintroduction of the species.
Impacts on Local Economic Conditions	Over the long term, wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/ No Wilderness Aiternative. Up to 40 fewer jobs would be provided by locatable mineral activities. Recreation-related expenditures would not be affected because present use is mainly primitive and would ocntinue to increase by 2 to 7 percent per year. The potential for commercial recreation use and resulting Federal revenues (currently $30 annually) would increase. Livestock grazing sales and Federal revenues would continue. Up to $20,560 in Federal and State lease revenues would be foregone each year. An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on Muddy Creek and its tributaries upstream of the WSA.	Present economic conditions would not be affected. Locatable mineral activity could increase employment in Emery County by 1.2 percent (80 jobs) by the year 2010. Primitive recreation-related local expenditures would increase by 2 to 7 percent per year over the next 30 years. Federal revenues from commercial recreation permitting (currently $30 annually) would continue. Livestock grazing would contribute $23,880 annually in livestock sales and $1,839 in Federal revenues. Present and future oil and gas leases could contribute up to $20,560 annually in Federal and State lease revenues.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

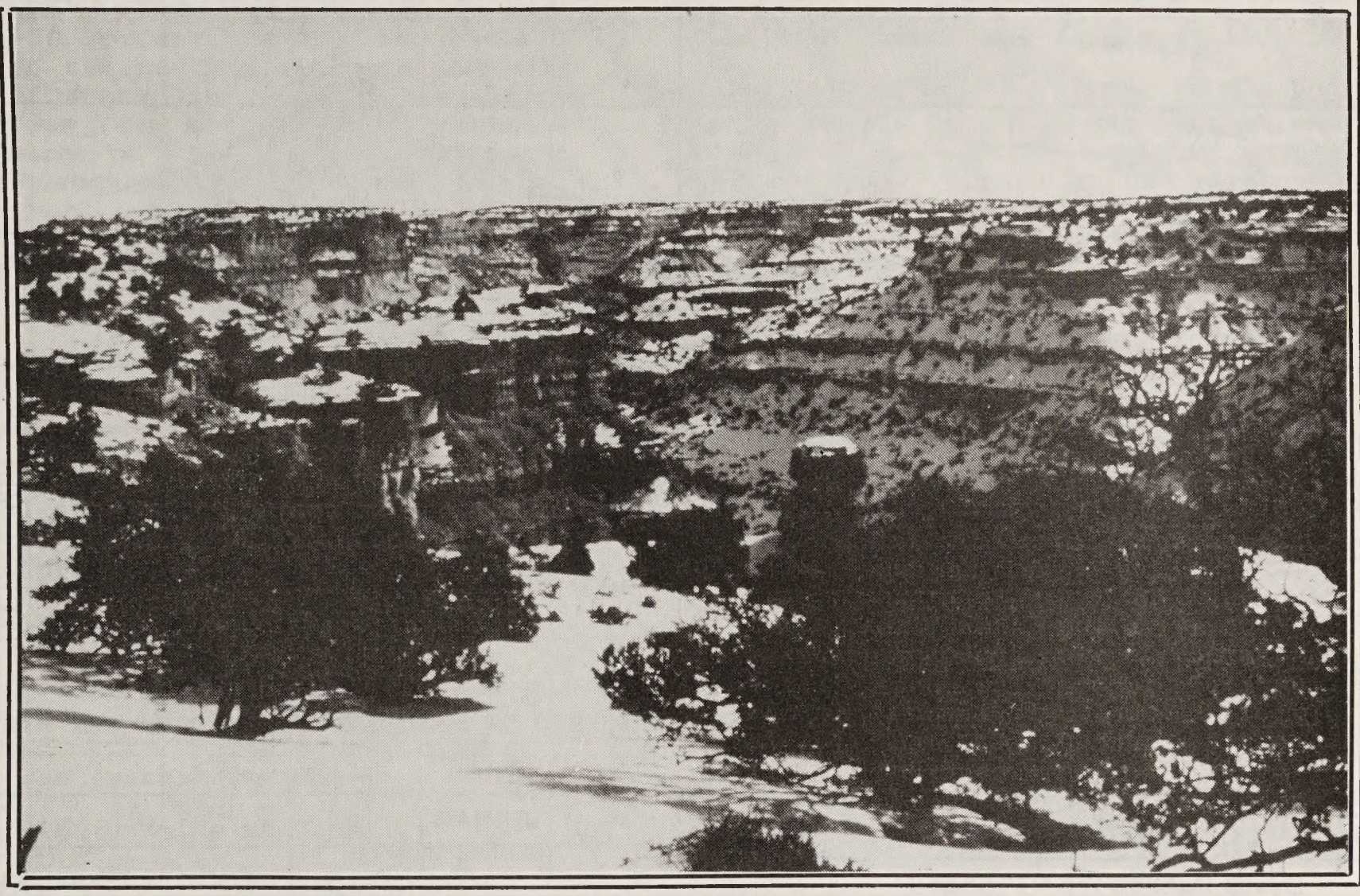
MUDDY CREEK WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 25 S., R. 9 E., Sec. 32	640.00		State	State	No	Exchange	$2,000	

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Devils Canyon WSA



DEVILS CANYON WSA

R. 8 E.

R. 9 E.

T. 23 S

T. 24 S.

Devils Canyon WSA Proposal
UT-060-025

NONE	RECOMMENDED FOR WILDERNESS
	RECOMMENDED FOR NON-WILDERNESS
NONE	LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
NONE	SPLIT ESTATE LAND WITHIN WSA BOUNDARY
NONE	STATE LAND WITHIN WSA BOUNDARY
NONE	PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

October 1991

DEVILS CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 9,610 acres

The Devils Canyon Wilderness Study Area (WSA) (UT-060-025) is in Emery County, about 12 miles south of Emery, Utah (population 372). The unit is about 7.5 miles long, from east to west, and up to 2.5 miles from north to south. Interstate Highway 70 (I-70) is north of and parallels the upper part of Devils Canyon. I-70 borders the WSA for about 7 miles on the northeast. Roads and sections of State land form the remaining boundaries (see Map). The WSA contains 9,610 acres of public land administered by the Bureau of Land Management (BLM).

There are no private, State or split-estate in-holdings within the WSA (see Table 1).

Devils Canyon is a rugged, sinuous gorge, with numerous short tributary canyons, that drains westward towards Muddy Creek. Pour-offs, abrupt changes in the gradient of the canyon floor, are characteristic of the area. The northeastern part of the WSA is a densely vegetated area of rounded knobs and benches. The southwestern portion of the WSA is a sparsely vegetated area of pink, red, cream, and purple soils.

Elevations in the WSA range from 6,200 feet in Devils Canyon at the western end of the WSA to 7,400 feet in the southeast. Pinyon-juniper is the dominant vegetation, on 88 percent of the area, with desert shrub and saltbush in the lower elevations.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	9,610
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	9,610
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	9,610
Split-Estate	0
Total BLM land not recommended for wilderness	9,610
In-holdings (State, Private)	0

Source: BLM File Data

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: a no wilderness (no action) alternative, which is the recommendation in this report, an all wilderness alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 1,620 acres of the Devils Canyon WSA which was included within the I-70 Scenic Corridor Area of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the ACEC include limiting off-highway vehicles (OHVs) to designated roads and trails and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights.

2. RECOMMENDATION AND RATIONALE:

0 acres
(recommended for wilderness)
9,610 acres
(not recommended for wilderness)

The recommendation for this WSA is to release the entire area for uses other than wilderness. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The WSA would be released for uses other than wilderness.

About 93 percent of the WSA is natural, 73 percent has outstanding opportunities for solitude, and 33 percent has outstanding opportunities for primitive recreation. Sounds from traffic on nearby I-70 limit solitude and primitive recreation values along some of the benches and parts of Devils Canyon that are near the highway. The relatively small size of the WSA and its narrow shape further reduce opportunities for solitude.

Approximately 400 of the 550 estimated annual visitor days of recreational use in the WSA are associated with use of motorized vehicles. The location of the study area adjacent to I-70 promotes this type of use. Release of the study area would allow for construction of a campground at Justensen Flats adjacent to the Interstate as proposed in the San Rafael Resource Management Plan (RMP).

Approximately 1,620 acres of the area recommended for wilderness designation are in the I-70 Scenic Corridor ACEC where restrictions on OHVs and management for protection of scenic values would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. About 93 percent (8,950 acres) of the WSA meets the criterion for naturalness. Imprints of human activities affect approximately 18 percent (1,680 acres) of the WSA. Of the 1,680 acres affected by existing OHV use, about 660 acres have been significantly impacted and do not meet the naturalness criterion for areas under wilderness review.

The major imprints surrounding the Devils Canyon WSA were excluded by boundary determinations during the BLM Intensive Wilderness Inventory. What remains of note is a reservoir, gap fence, and an accumulation of OHV trails and camping areas.

The reservoir is in the Justensen Flats area. It has silted in and holds little or no water. The gap fence is along the southeastern boundary of the WSA and is approximately a 0.25 mile long. Both the reservoir and fence are substantially unnoticeable.

Extensive OHV use has caused imprints (such as trails and camp sites) in the Justensen Flats, Sagebrush Bench, and Kimball Draw areas of the WSA.

The most heavily used areas are Justensen Flats and the Devils Canyon entrance where six to eight trails and several camping areas have become well established. Campers and trailers are common in this area during the spring and fall months. BLM recreation use statistics since 1976 show a steady number of users each year. More than 100 people and 10 camping units have been counted in the Justensen Flats area during Easter weekend. The impacted area on Justensen Flats is about 600 acres.

The Sagebrush Bench area is also used by recreational OHVs and by individuals looking for wild horses. An old road leads from Link Flats to an open valley and airstrip. Some vehicular camping takes place in the valley, but mostly trails exist where OHVs have explored. Recreational use in this area is at least half the amount that occurs in Justensen Flats, and there are fewer trails. Overall, about 60 acres have been affected.

Recreationists also travel into Kimball Draw searching for wild horses or for vehicular play. Access is obtained easily by way of Kimball Draw and an old seismic line that forms the WSA's southern boundary. Vehicular impacts are less concentrated than in Justensen Flats and consist mainly of 2-wheel tracks. Approximately 960 acres have been disturbed by OHV use in this portion of the WSA.

B. Solitude

About 73 percent of the WSA (7,050 acres) meets the criterion for outstanding solitude. The remaining 27 percent (2,560 acres) does not meet the criterion. The narrow configuration of the WSA and its alignment with I-70 result in a lack of solitude in some portions of the WSA.

Outstanding opportunities for solitude occur in parts of the WSA. Such areas, however, are limited to 3 miles of the western portion of the Devils Canyon drainage and several of the southeastern tributaries, where steep cliffs and the sinuous nature of the canyon effectively screen sights and sounds for considerable distances. Off-site intrusions and influences are practically nonexistent within these specific areas.

Approximately 3 miles of the WSA's northernmost boundary is along the I-70 right-of-way, including the Devils Canyon View Area. I-70 parallels the WSA and makes a significant grade to the Moore Road-Copper Globe turnoff on the east and Salt Wash to the west. I-70 receives large volumes of traffic, especially semi-trucks and trailers. A Utah Department of Transportation study indicated that more than 1.8 million people traveled on I-70 through the San Rafael Swell in 1987.

Travel along I-70 is expected to increase and more than 2,700 vehicles a day are expected to travel I-70 across the swell by the year 2005.

The continual traffic noise of I-70 reduces the sense of solitude in several areas in the WSA. These areas include the northern portion from the right-of-way to the Devils Canyon drainage, the Justensen Flats area, and specific points throughout the Devils Canyon drainage. Traffic also can be heard in the high country on the southern side of Devils Canyon and the southwestern portion of the WSA, where sounds of I-70 are present. These areas, however, receive intermittent sounds that are not as distinguishable as in the northern parts of the WSA.

Justensen Flats, approximately 600 acres in size, is along a portion of I-70 where traffic is clearly visible. I-70 makes a steep incline here and constant noise from vehicles can be heard. Most of the area is flat grassland, spotted with clusters of pinyon pine and juniper trees, and outstanding opportunities for solitude are lacking.

The northern portion of the WSA, from the I-70 right-of-way to the Devils Canyon drainage, also lacks solitude because of the proximity of I-70 and its almost constant traffic noise.

In some specific locations within the Devils Canyon drainage, traffic noise

from I-70 is so noticeable that it dominates the natural sounds. The canyon is narrow and confined. On the east end approximately 1,100 acres are affected by I-70 sounds. Only a strip of land about 1 mile wide along the southern side of the WSA is free from the noise influence of I-70.

C. Primitive and Unconfined Recreation

Opportunities for hiking and backpacking are outstanding on 3,200 acres.

These opportunities are confined primarily to the eastern portion of the WSA or to the Devils Canyon drainages because of the rugged terrain that splits the WSA. The Devils Canyon drainage is one of the few places in the WSA where recreational opportunities are outstanding and this drainage is probably where most visitors enter and leave the WSA. It is also the main focal point and makes up the most interesting terrain in the WSA.

Hunting and horseback riding are constrained because of the lack of game, rugged topography, and lack of water.

D. Special Features

The entire WSA is rated outstanding for scenic quality.

A small wild horse herd of approximately 10 to 15 animals use the WSA. Cougar, a wildlife species associated with wilderness, may occasionally visit the WSA. The black-footed ferret, an endangered species, and nine additional animal species considered sensitive, may frequent or inhabit the WSA.

Two plant species, Maguire daisy (Erigeron maguirei var. maguirei) and Wright fishhook cactus, (Sclerocactus wrightiae), that are listed as endangered, may be found within or near the WSA. Two threatened plant species, Jonesii cycladenia (Cycladenia humilis var. jonesii) and Last Chance townsendia (Townsendia aprica), and an additional five plant species that are considered sensitive may also occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is galleta-threeawn shrubsteppe (1,922 acres) and juniper-pinyon woodland (7,688 acres).

The galleta-threeawn shrubsteppe PNV is not represented at all in the NWPS and is represented in other BLM wilderness study areas only in Utah.

Juniper-pinyon woodland PNV is represented in the NWPS and is common in other BLM study areas, both in Utah and in other states.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah, standard metropolitan statistical areas.

Table 3 summarizes the number and acreages of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	188,804
Juniper-Pinyon Woodland	11	1,401,745	84	2,136,317
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	188,804
Juniper-Pinyon Woodland	1	26,000	53	1,698,510

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,250,065
Provo-Orem, Utah	11	721,793	90	2,777,258

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Devil's Canyon WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Devils Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U. S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

If designated, the WSA could be managed as wilderness to preserve the values now present in the area. Livestock grazing and maintenance of rangeland development would continue, but would not significantly affect wilderness values. There are no mineral leases in the WSA and new leases would not be issued. There are presently no mining claims in the WSA and the probability of valid claims being located in the WSA at the time of designation is low.

There are no in-holdings or other valid rights in the WSA that would complicate wilderness management. However, it would be administratively difficult to control OHV use in the Justensen Flat area

adjacent to I-70 where the area is readily accessible because there are no topographic barriers and where OHV use has been popular for many years. The off-site sights and sounds of I-70 could not be managed or controlled.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for the area. According to BLM geologists, the potential for oil and gas resources in the WSA is low. The potential for potash, tar sand, and geothermal resources is also low.

The potential for undiscovered uranium deposits is moderate. However, it is believed that ore bodies, if found in the WSA, would be small discontinuous, and at depths presently uneconomical to mine. The potential for other metallic minerals and for gypsum is low.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 300 inputs specifically addressing this WSA were received from 947 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 52 commenters supported wilderness designation for part or all of the WSA, while 441 commenters were opposed. Four hundred and fifty-four commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features of the WSA and the opportunities for solitude. Of particular concern was the need to protect the WSA from OHV use. The majority of those commenting in favor of wilderness were from outside of Utah.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict livestock management and public access, cause Federal air quality standards for the area to become more restrictive, prove to be incompatible with multiple use, and harm State and local economies. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM, expressed no opinion regarding wilderness designation, but stated that BLM had underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are no State sections within the WSA. The State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation of the WSA. The State commented that the WSA has both low wilderness values and conflicts compared with other WSAs in the San Rafael Swell Region, that the major concern is with extensive ORV use, and that moderate conflicts exist with potential gypsum resource developments. Specific State comments dealt with errors in wording and page numbers, the genesis and size of tar sand units, the degree of uranium potential, the presence of golden eagles and desert bighorn sheep, the degree of solitude, and zoning.

DEVILS CANYON WILDERNESS STUDY AREA

The Devils Canyon WSA is in Emery County. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission commented that the wilderness values of the WSA are questionable and that designation would be contrary to the County Master Plan. The Commission expressed concerns that wilderness could lead to stricter air quality standards and could prevent mining, which could limit economic growth in Emery County.

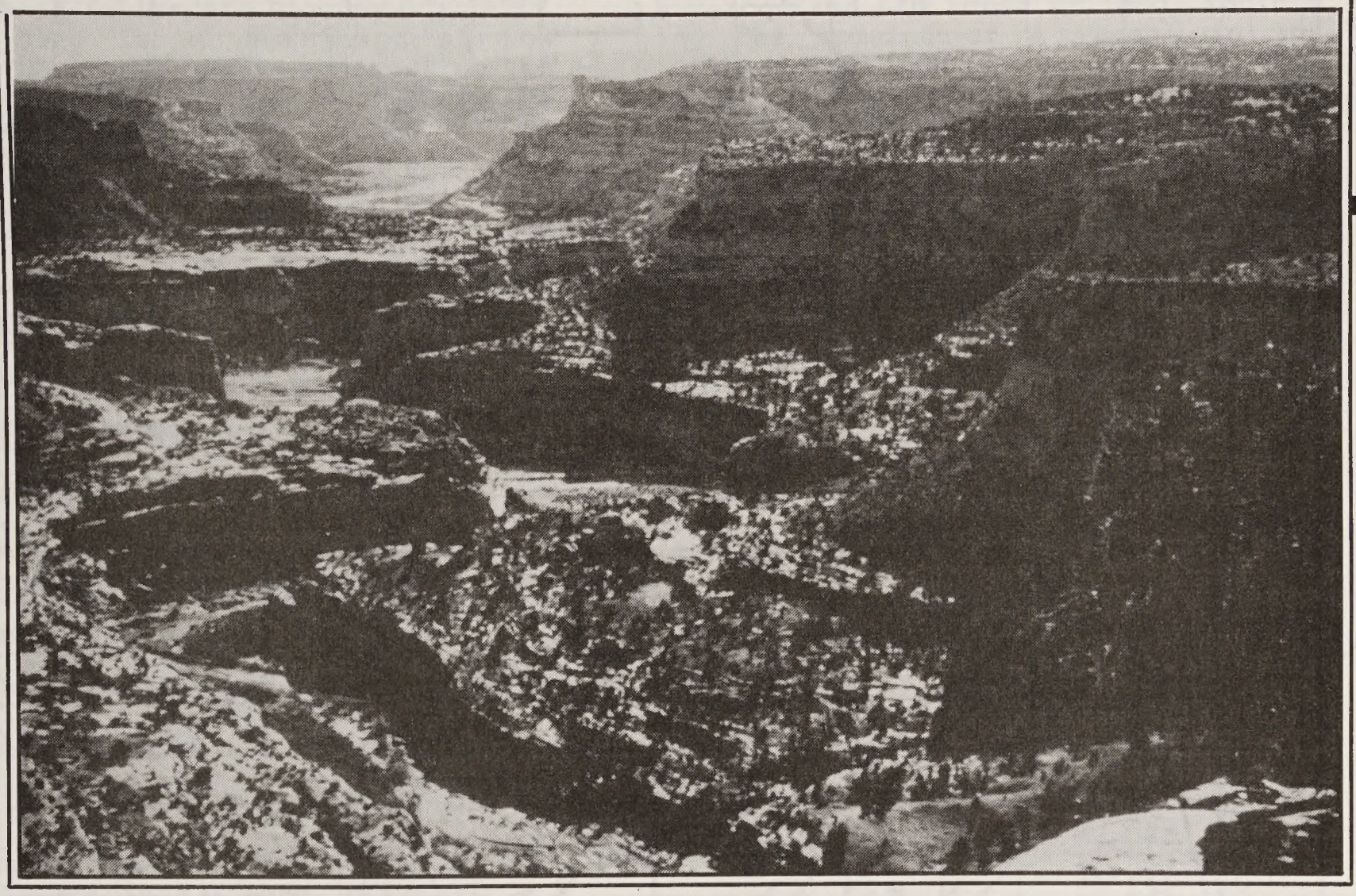
DEVILS CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation No Action/No Wilderness	 All Wilderness (9,610 Acres)
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be reduced on up to 3,844 acres of the WSA from increased OHV activity. OHV use would be restricted to designated roads and trails. OHV monitoring and enforcement of protective measures would be necessary to assure that impacts on special features, such as special status species, would not be significant.	Wilderness designation would preserve the wilderness values in the WSA. Visitor use restrictions may be necessary to prevent congestion within Devil's Canyon.
Impacts on Vegetation	Vegetation types would not be affected by implementation of this alternative. Continued OHV use would result in the loss of individual plants of special status species. However, OHV use would be restricted to designated roads and trails, which would reduce the potential for disturbance of populations of threatened, endangered, and other special status plant species.	By eliminating all OHV use, wilderness designation would provide additional protection to vegetation, including all populations of threatened, endangered, or sensitive plants which may occur in the WSA.
Impacts on Wildlife Habitat and Populations	Increased OHV use would result in adverse impacts on wildlife habitat and populations including special status species on about 40 percent (3,844 acres) of the WSA. Monitoring of OHV use and enforcement of protective measures would be necessary to ensure that impacts would not be significant.	By eliminating all OHV use, wilderness designation would protect all wildlife species and provide additional solitude.
Impacts on Cultural Resources	Intentional or unintentional damage to archaeological sites may occur due to continued vehicular access and OHV use. Cultural resource management would continue without regard to preservation of other wilderness values.	Cultural resources would be protected under this alternative. Cultural resource management may be limited in scope and execution in order to protect other wilderness values.
Impacts on Recreation	The quality of primitive recreation would be reduced on 40 percent (3,844 acres) of the WSA in the Justensen Flat, Sagebrush Bench, Kimball Draw, and upper Devils Canyon areas. Both primitive and mechanized recreational use would increase 2 to 7 percent over the next 30 years. Primitive use may eventually decline.	Primitive recreational values would be protected. Primitive recreational use would increase from the current 150 annual visitor days up to as much as 1,307 visitor days per year by the end of 30 years. Existing (400 annual visitor days) and projected (up to 3,486 annual visitor days by the end of 30 years) ORV recreational use would be eliminated. OHV use in the San Rafael region would probably not decline because there are other ORV play areas near but outside the WSA.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

Sids Mountain WSA



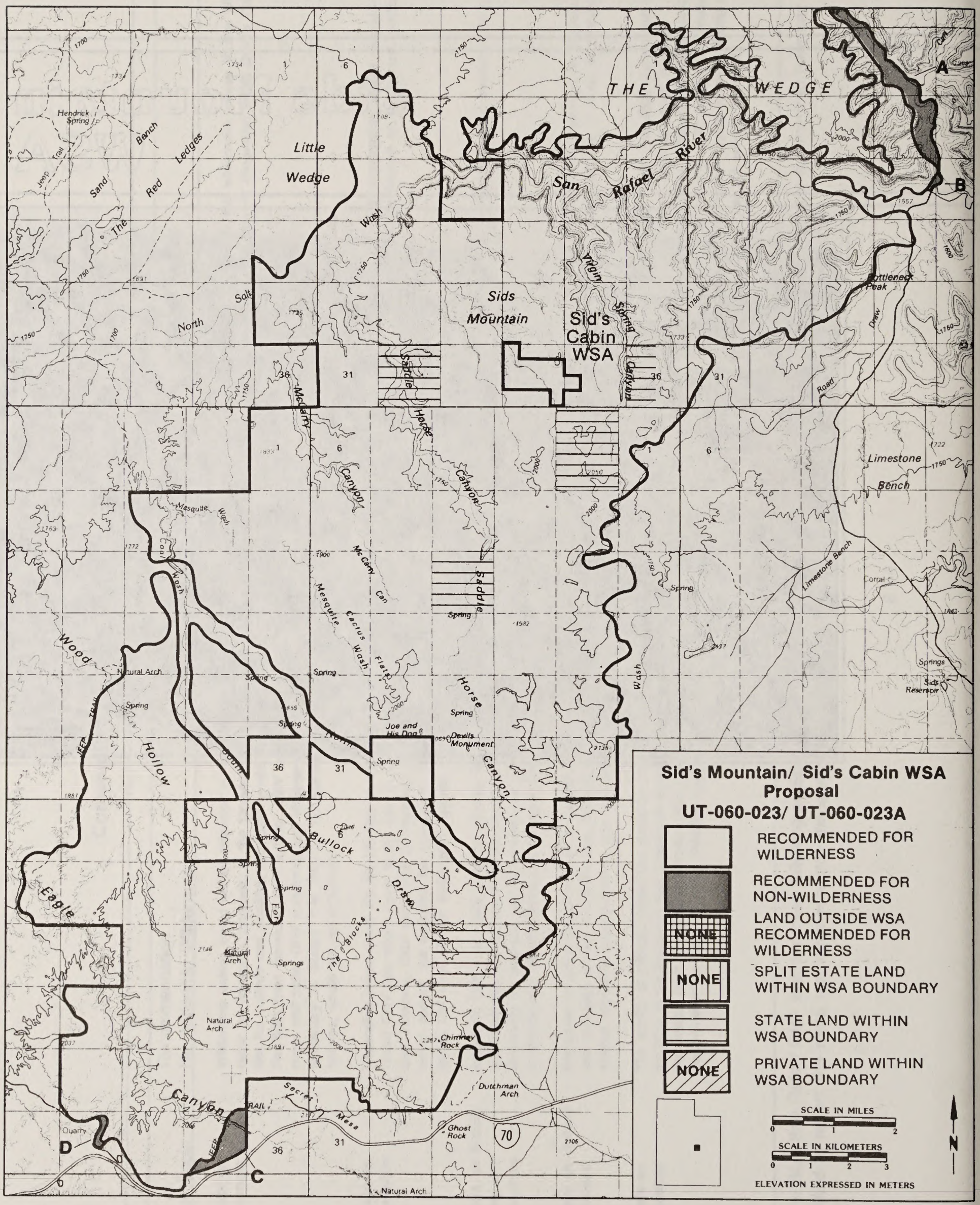
SID'S MOUNTAIN / SID'S CABIN WSA

R. 9 E. R. 10 E. R. 11 E.

T. 20 S.

T. 21 S.

T. 22 S.



Sid's Mountain/ Sid's Cabin WSA Proposal

UT-060-023/ UT-060-023A

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES 0 1 2

SCALE IN KILOMETERS 0 1 2 3

N

ELEVATION EXPRESSED IN METERS

October 1991

SIDS MOUNTAIN/SIDS CABIN WILDERNESS STUDY AREA

1. THE STUDY AREA: 80,970 acres

The Sids Mountain Wilderness Study Area (WSA) (UT-060-023) is in Emery County. The southern end of the WSA is about 48 miles west of Green River, Utah (population 1,048). The study area is about 22 miles long, from north to south, and 8 miles across, from east to west. The WSA is north of Interstate Highway 70 (I-70) and adjoins it at one point on the south. The study area is adjacent to the Mexican Mountain WSA (UT-060-054) on the northeast and is north of the Devils Canyon WSA (UT-060-025).

The northern boundary generally follows the north rim of the San Rafael River; the eastern boundary follows Buckhorn Draw and the rugged terrain defining Sids Mountain; I-70 and section lines form the southern boundary; the western boundary follows jeep roads and section lines (see Map).

BLM acquired 440 acres of land, including the remains of a ranch, in the north-central portion of the WSA. This parcel of land was referred to as the Sids Cabin WSA (UT-060-023A).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	80,970
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	5,031
Total	86,001
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	80,084
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	80,084
In-holdings (State, private)	3,111
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	886
Split-Estate	0
Total BLM land not recommended for wilderness	886
In-holdings (State, Private)	1,920

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Because the 440-acre parcel of land is within the WSA and is physically identical it has been included in the Sids Mountain/Sids Cabin WSA. For ease of reference, the study area is referred to as the Sids Mountain WSA.

The combined WSA contains 80,970 acres of public land administered by the Bureau of Land Management (BLM). Eight sections of State land (5,031 acres) are inheld in the WSA, five sections (3,111 acres) are in the portion recommended for wilderness designation (see Table 1).

The study area includes the northwestern portion of the San Rafael Swell, a distinctive upfold in central Utah. The WSA is characterized by an intricate canyon system which drains northward into the San Rafael River in the extreme northern portion of the WSA. The canyons typically have massive sandstone walls, winding routes, and numerous small tributary canyons. Above and between the canyons are flat to hilly grass parks. The western portion of the WSA is rough badlands terrain of colorful, eroded soils, cliffs, and small mesas.

Elevations in the WSA range from 5,100 feet on the San Rafael River to 6,800 feet in the southern portion of the WSA. Pinyon-juniper woodland is the dominant vegetation in about 90 percent of the WSA. Desert shrub predominates in the lower elevations and on rocky slopes.

The WSA was studied under Sections 202 and 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative, where 80,084 acres of public land would be designated as wilderness and the remaining 886 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 67,680 acres of the Sids Mountain WSA in the Sids Mountain, San Rafael Canyon (upper portion), and Interstate 70 (I-70) Scenic Corridor Areas of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the San Rafael Canyon ACEC (along the San Rafael River) include closure to off-highway vehicle (OHV) use, closure to oil and gas leasing, proposed withdrawal from locatable mineral entry, and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights. Special management requirements within the Sids Mountain and I-70 Scenic Corridor ACECs limit OHVs to designated roads and trails. However, since all of the San Rafael Canyon ACEC and the northern part of the Sids Mountain ACEC have been identified as "primitive" in the Recreation Opportunity Spectrum (ROS) classification system (ROS-P), the northern half of the WSA is now closed to OHV use, in order to manage for ROS-P class.

2. <u>RECOMMENDATION AND RATIONALE</u>:

80,084 acres
(recommended for wilderness)
886 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 80,084 acres as wilderness and to release the remaining 886 acres for uses other than wilderness. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the area that is recommended for wilderness designation meets the naturalness criterion, has outstanding opportunities for primitive recreation, and almost all of the area has outstanding opportunities for solitude. Archaeolo-

gical, geological, scenic, historic, ecologic, and wildlife values and features are exceptional. Habitat for 9 sensitive and endangered plant species is within the recommended portion of the WSA.

The water of the San Rafael River is not fully appropriated. Therefore, conflict over water rights could ensue from wilderness designation. Additionally, the BLM notes that designation of the WSA could result in restrictions on future water consumptive developments on the river and its tributaries upstream of the WSA, with resultant impacts on the economy of Emery County. Because of the uncertain nature of the impacts, BLM recommends that a portion of the WSA be designated wilderness with special provisions for protection of potential upstream water uses.

There is high potential for moderate-sized uranium/vanadium deposits. However, these would probably be subsurface and recovery costs would be high. Uranium also may be found in the same geologic formations elsewhere in the vicinity and the Sids Mountain area is not essential to supply market needs for uranium.

Wilderness would take precedence over OHV use except in the Coal Wash, Bullock Draw, and Buckhorn Draw areas, which are excluded from the recommended area. Almost all of the area recommended for wilderness designation is in the Sids Mountain, San Rafael Canyon, and I-70 Scenic Corridor ACECs and ROS-P class where restrictions on OHVs and mineral and energy exploration and production would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective. Additional locations are also available elsewhere in the vicinity. Wilderness designation of the recommended portion of the WSA would therefore not significantly constrain vehicular recreation in the area. No conflicts exist with other resource uses.

The North and South Forks of Coal Wash and parts of Bullock Draw (see Map) are not recommended for wilderness because of their traditional use as vehicular travel routes. This would divide the proposed area into two sections, but both are sufficiently large to maintain wilderness values. OHV use can be confined to the two washes, where evidence of such use would be removed by normal seasonal stream runoff.

A small area (Area C) on the southern edge of the WSA would not be included as wilderness under this recommendation because of the influence of sights and sounds from the nearby I-70. A small area (Area A) in Buckhorn Draw is also excluded from the recommendation because of low wilderness values and the influence of nearby vehicular traffic and recreation use.

The BLM recommends that the boundary be set back from county roads in two areas (Areas B and D) to allow for road maintenance and traditional uses of camping and vehicle traffic. The boundary at Area B should be set back approximately 100 feet to the bottom of the cliff. The boundary at Area D should be set back approximately 100 feet to the rim of the canyon.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

All human imprints combined (except for Sids Cabin and the travel route into Eagle Canyon) cover approximately 5 percent (4,000 acres) of the WSA, but are considered substantially unnoticeable. The route into Eagle Canyon (426 acres) and Sids Cabin (1 acre) are substantially noticeable and do not meet the naturalness criterion. The remainder of the WSA (76,543 acres) is natural and considered unspoiled in character.

The major imprints of man were excluded from the WSA by boundary determination during the BLM Intensive Wilderness Inventory. Imprints that remain are a

stock pond and associated way, OHV trails, three mine portals, a 2-mile fence, about 19 miles of OHV tracks in four wash bottoms, approximately 8 miles of way, and some historical structures in the Sids Cabin area. These imprints occurred before the passage of FLPMA, unless otherwise noted.

The stock pond and the associated way along the WSA's western boundary are used lightly and are not a substantially noticeable impact.

Buckhorn Draw, a popular and well traveled canyon, is used heavily for vehicular camping and OHV activities. Along the northeastern boundary of the WSA are vehicular camping areas and associated OHV trails. Trash and fire rings accumulate during the spring months, when use is heavy.

Two mine shafts are in the northeastern part of the WSA along Cane Wash. Another shaft is beside the San Rafael River in the northwestern part of the WSA. All three mine shafts were excavated in the 1950s. Erosion and vegetation have made the shafts substantially unnoticeable.

In the Sids Cabin portion of the WSA, a historic cowboy cabin, small corrals, and several outbuildings are still noticeable.

Approximately 2 miles of fence made of cedar post, green steel posts, and barbed wire along the western border of the WSA, near Wood Hollow, is substantially unnoticeable.

A way near Mesquite Wash that extends about 1.5 miles into the WSA remains noticeable because of occasional vehicular use, mostly associated with livestock management and OHV recreation. Another way, about 3.5 miles long, into the Secret Mesa area is evident for approximately 2 miles from the WSA's southern boundary but is washed out in several places from there on. The route is kept evident by a small amount of intermittent use. West of the Secret Mesa way, another travel route into Eagle Canyon is approximately 3 miles long and is used by OHV operators and motorcyclists venturing into Eagle Canyon from Justensen Flats or from the Utah Department of Transportation maintenance shed near I-70. The route is very evident and is preserved by frequent vehicle use.

Since establishment of the WSA approximately 0.5 acre of the study area has been disturbed. This disturbance resulted from unauthorized mining claim assessment work near the junction of Moore Road and I-70. The area is being reclaimed to meet the nonimpairment standard.

B. Solitude

Opportunities for solitude are outstanding in more than 95 percent of the WSA (76,970 acres). In about 5 percent of the WSA (4,000 acres), opportunities for solitude are not outstanding. These include the wide major wash bottoms, Buckhorn Canyon, and a portion of Eagle Canyon.

The many incised drainages allow travel through deep walled canyons where users experience a sense of isolation. The twisting character of the canyons and cliffs effectively screen lines of sight and suppress sounds. In some of the major drainages (e.g., Saddle Horse, Buckhorn, the North and South Forks of Coal Wash, and Bullock Draw), however, there are wide, straight reaches where sounds are not diminished. Intrusions and influences outside the WSA are rare within the canyons, except in the drainage of Eagle Canyon. There, within about a 0.25 mile of I-70 the sounds of heavy traffic can be heard. Beyond the travel route, in the drainage to the northwest, sounds are less evident and vehicles usually are not noticeable except on occasional days when OHV use is high.

The higher reaches of the WSA, consisting of rolling park lands and sandstone outcrops are partly open and provide vantage points to view the vast landscape. To the north and south are views of the varied canyons of the San Rafael drainage. The lower benchland of the Swell can be seen to the east, along with a panorama of Window Blind Peak, Assembly Hall Peak, Mexican Mountain, and the Book Cliffs. To the west, the scenery is dominated by mesas of red ledges, the colorful character of the desert badlands, and the distant Wasatch Plateau. Vegetation cover varies from

grass to Ponderosa pine and does not effectively screen visitors. The terrain and the expansive view allow for separation and the feeling of seclusion.

From specific points within the WSA, several dirt roads, traffic on I-70 (adjacent to southern boundary), and the two powerplants in Huntington and Castle Dale can be seen. These outside sights do not necessarily intrude upon the visitor's solitude. Traffic sounds from I-70 can be heard from specific points within the WSA. The level and intensity, however, changes with weather conditions and the position of the listener. In general, opportunities for solitude are diminished in areas of the WSA that are open, in a direct line, and within 2 miles of the highway.

C. Primitive and Unconfined Recreation

The Sids Mountain WSA offers outstanding opportunities for primitive recreation throughout all 80,970 acres. In the spring, high water levels in the San Rafael River provide an outstanding opportunity to float the scenic passage of Little Grand Canyon. During low water periods, hiking the canyon becomes a popular activity. Many organized groups take advantage of the recreation opportunity along the San Rafael River.

Outstanding opportunities for hiking, backpacking, horseback riding, rock scrambling, photography, art, and scenic viewing await explorers in most of the WSA. Many isolated springs and pools of water during parts of the year provide contrast to the general aridity of the WSA. The interesting nature of the rock outcrops and the canyons with their sheer walled cliffs, arches, knobs, pinnacles, twisted passages, and historic and prehistoric remnants, all contribute to a high quality recreational experience.

D. Special Features

Special features found in the WSA include known and suspected sites of the Fremont Indian culture, historic travel and trade routes, and scenic values such as the colorful and dramatic rock forms in the intricate canyon drainages, arches, caves, pinnacles, buttes, and knobs. Geologic values include the several formations exposed during the uplift of the San Rafael Swell. The entire WSA is rated as outstanding for scenic quality. Desert bighorn sheep, a species associated with wilderness, occurs within the WSA. Cougars may also occur within the WSA. Black-footed ferrets, bald eagles, and peregrine falcons, all listed as endangered species, and nine other animal species considered sensitive, may occur within the WSA. Three plant species, Maguire daisy, (Erigon Maquierei var. maquierei), San Rafael cactus (Pediocactus despainii), and Wright fishhook cactus (Sclerocactus wrightriae), which are listed as endangered species, may be found near or within the WSA.

Also, two threatened species, the Jones cycladenia (Cycladenia humilis var. jonesii) and the Last Chance townsendia (Townsendia aprica), and four additional plant species that are considered sensitive, may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is galleta-threeawn shrubsteppe (28,625 acres) and pinyon-juniper woodland (36,239 acres). The galleta-threeawn shrubsteppe PNV is not represented at all in the NWPS, whereas the pinyon-juniper woodland PNV is widely represented in the NWPS, including one wilderness in Utah. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	162,101
Juniper-Pinyon Woodland	11	1,401,745	84	2,107,766
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	162,101
Juniper-Pinyon Woodland	1	26,000	53	1,669,959

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,178,705
Provo-Orem, Utah	11	721,793	90	2,705,898

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and the Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The Sids Mountain WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Sids Mountain Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U. S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness designation can be managed as wilderness to preserve values now present in the area, and to avoid

conflicts with traditional OHV access routes. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. Even though there are 520 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to stipulations for protection of wilderness values and it is expected that they will expire and not be renewed.

There are 5,820 acres of mining claims in the recommended portion of the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 24 acres in the recommended portion of the WSA following wilderness designation, but this would not affect the overall manageability of the area. The presence of five in-held State sections (3,111 acres) scattered through the recommended part of the study area could create additional manageability problems because BLM would be required to provide reasonable access to State land and would have no control over activities on State land. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in small portions of the recommended wilderness.

The 886 acre area not recommended for wilderness designation also could be managed as wilderness, although it would be more difficult to do so because additional roads leading to in-held State lands would actually be within the designated wilderness. In addition, OHV use would be administratively difficult to control in the area not recommended for wilderness because of ease of access and traditional vehicle use patterns.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the Sids Mountain WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., N.D.). Commodities evaluated include uranium, geothermal energy, gypsum, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, sulfur, petrified wood, and tar sand.

The mineral resource potential for localized, thin tar sands of variable grade in the WSA is high. The report indicates that within the Carmel Formation, there are inferred subeconomic resources of about 103 million tons of gypsum in the Sids Mountain WSA. The resource potential for gypsum on the surface is high in the western part of the Sids Mountain WSA. The WSA has high resource potential for uranium and vanadium in the Chinle Formation. The resource potential is moderate for oil and gas, geothermal energy, and for carbon dioxide and helium gases. The resource potential for metals other than uranium and vanadium, including gold and copper, is low. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, partial wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Approximately 80 fewer jobs would be provided by locatable mineral activities with this alternative. This is equivalent to about 1.2 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $80,360 annually to the local economy at the end of 30 years. Livestock grazing would continue to contribute $48,500 annually in livestock sales and $3,735 in Federal revenues. Up to $47,290 in Federal and State oil and gas lease revenues would be foregone each year. Federal revenues related to commercial recreation would increase.

An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on the San Rafael River and its tributaries upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 482 inputs specifically addressing this WSA were received from 1,176 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 258 commenters supported wilderness designation for part or all of the WSA, while 471 commenters were opposed. Four hundred and forty-seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA contains wilderness values and that wilderness designation would protect the area from OHV use. The majority of those commenting in favor of wilderness were from urban Utah and other states. They also noted that the forest resource data presented in the Draft EIS were inadequate.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development, restrict livestock management, and harm state and local economy. Concern was expressed that wilderness designation is not compatible with multiple use and that it would result in more restrictive Federal air quality designation for the region. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the USBM, expressed no opinion regarding wilderness designation but stated that BLM underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are eight sections of State lands within the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding this WSA. The State commented that the WSA has moderate wilderness values and a high degree of conflict compared with other WSAs in the San Rafael Swell Region. High quality wilderness values would benefit from wilderness management, but according to the State there are major conflicts with uranium and gypsum resources and OHV use for recreation and livestock management. The State noted that the partial wilderness alternative reduces recreation conflicts, but would not mitigate mineral or livestock conflicts, particularly in the southern one-third to one-half of the WSA. Specific State comments dealt with inadequacies of the geology section of the Draft EIS, the reported location of tar sand, the high potential for uranium, and impacts on cultural resources.

The Sids Mountain WSA is in Emery County. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that wilderness designation would be in conflict with the County Master Plan. The Commission believes that the mineral potential of the WSA is higher than described in the EIS; that the State in-holdings and use of roads by local residents will compromise the manageability of the area; that the area is not roadless; and that wilderness designation would lead to more restrictive air quality standards and Federal Reserved Water Rights that would devastate the economy of Emery County.

SIDS MOUNTAIN/SIDS CABIN WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation Partial Wilderness (80,084 Acres)	No Action/No Wilderness	All Wilderness (80,970 Acres)
Impacts on Wilderness Values	Wilderness values would be protected in the designated area which is approximately 99 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 32 acres of the WSA because of uranium exploration and development of access to State in-held lands. Vehicular use of about 13 miles of existing ways, wash bottoms, and trails in the nondesignated area would detract from opportunities for solitude and primitive recreation. Wildlife associated with wilderness would be disturbed and the potential for vandalism of cultural resources would increase. Class A scenery would be reduced in quality in disturbed and surrounding areas. Overall, opportunities for solitude and primitive recreation would be reduced in quality on up to 9,518 acres. Wild and scenic river values of the 18 miles of the San Rafael River in the WSA would receive additional protection.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 83 acres of the WSA because of uranium exploration and development and development of access to in-held State lands. Vehicular use on designated roads and trails in the southern portion of the WSA and future mining and access roads to State in-holdings, would detract from naturalness and opportunities for solitude and primitive recreation. OHV use in the sou;ern half of the WSA also would disturb wildlife, archaeological, and historic values. Overall, opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 16,194 acres. Class A scenery would be reduced in quality in the disturbed and surrounding areas. Wild and scenic river values of the 18 miles of the San Rafael River in the WSA would not receive additional protection.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 32 acres because of uranium exploration and development on valid mining claims and development of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 3,240 acres. Special features would be preserved overall, although some Class A scenery could be reduced in quality in disturbed and surrounding areas. The wild and scenic river values of the 18 miles of the San Rafael River in the WSA would receive additional protection.
Impacts on Vegetation	Because 99 percent of the WSA would be designated wilderness and 32 acres of surface disturbance are projected, impacts on vegetation would be about the same as with the All Wilderness Alternative. Special status species could be affected by OHV use on 886 acres and monitoring and corrective measures may be necessary.	Vegetation types and populations of threatened, endangered, or other special status plant species would not be significantly affected because the 83 acres of projected surface disturbance would affect only 0.1 percent of the WSA. Impacts from OHV use in the southern portion of the WSA on 1,520 acres of access routes would be monitored and corrective measures taken should populations of threatened, endangered or other special status species be jeopardized.	Vegetation types and threatened, endangered, or other special status plant species would be protected by this alternative because projected disturbance would be reduced from 83 acres to 32 acres and OHV use would be eliminated. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.

SIDS MOUNTAIN/SIDS CABIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (80,084 Acres)	No Action/No Wilderness	All Wilderness (80,970 Acres)
Impacts on Water Resources	Impacts would be about the same as with the All Wilderness Alternative because 99 percent of the WSA would be designated wilderness, the same amount of disturbance (32 acres) projected, and because the San Rafael River would flow through the designated area.	This alternative would not alter present or future water quality or uses. Only 0.1 percent (83 acres) of the WSA would be disturbed and there would be no restrictions on water uses imposed by wilderness management.	Water quality would receive additional protection because the potential for surface disturbance would be reduced. In the long term, future water diversions and new consumptive uses in the San Rafael River system upstream of the WSA may be restricted or precluded. Potential upstream uses include irrigation, cooling water for coal-fired generation of electicity, coal mining, and municipal use in Emery County.
Impacts on Mineral and Energy Exploration and Production	Impacts and conclusions for mineral and energy exploration and development would be the same as for the All Wilderness Alternative because 99 percent of the WSA, including potential uranium development areas would be designated wilderness.	Mineral and energy exploration and production would not be affected because mineral leasing, location of mining claims and mineral developments would not be restricted for the protection of wilderness values. Plans of operation would continue to be required on all valid claims within the Sids Mountain and Highway I-70 Scenic Corridor ACECs. In the San Rafael Canyon (upper portion) ACEC, no oil and gas leases would be issued and the area would be proposed for withdrawal from locatable mineral entry.	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Although some production would occur, opportunities for production of an unknown portion of the uranium in the WSA would be foregone. No other significant locatable or leasable mineral production would be foregone because the probability of development is low even if the area is not designated wilderness.
Impacts on Wildlife Habitat and Populations	There would be no significant impacts to wildlife habitat or populations including threatened, endangered, or sensitive animal species due to locatable mineral development of new access. However, because OHVs would be used on 886 acres of ways and washes, big horn sheep, raptors and special status species could be affected. The potential for those impacts would be less than with the No Action/No Wilderness Alternative because 14 of the 27 miles of access routes would be closed to OHV use.	About 0.1 percent (83 acres) of the wildlife habitat in the WSA would be directly disturbed and OHV use would continue on 1,520 acres of ways and washes. Populations of bighorn sheep, raptors, and special status species could be affected. Monitoring and enforcement of protective measures may be necessary.	Approximately 0.04 percent (32 acres) of the wildlife habitat would be disturbed. Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term.

SIDS MOUNTAIN/SIDS CABIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (80,084 Acres)	No Action/No Wilderness	All Wilderness (80,970 Acres)
Impacts on Livestock Management	Levels of livestock use would not be affected. The closure of 13 miles of roads, trails, and ways would result in changes in livestock management and supervision as they are currently practiced in the WSA. Restrictions on vehicle use would increase costs and cause inconvenience to the 68 permittees whose livestock graze in the WSA.	Livestock management and grazing levels would not be affected because access, grazing levels and management techniques would remain as at present.	Levels of livestock use would not be affected. The closure of 27 miles of roads, trails, and ways would result in changes in livestock management and supervision as they are currently practiced in the WSA. Restrictions on vehicle use would increase costs and cause inconvenience to the 68 permittees whose livestock graze in the WSA.
Impacts on Cultural Resources	Archaeological sites, including all of the recorded sites, would receive protection from wilderness designation under this alternative. Sites in the nondesignated portion would continue to receive protection under existing laws because 99 percent of the WSA would be designated and disturbance would be about the same as with the All Wilderness Alternative. Impacts from direct disturbance would be about the same. Continued vehicular access to 886 acres may result in intentional or unintentional damage to archaeological sites.	Impacts due to surface disturbance are expected to be minimal because only 0.1 percent (83 acres) of the WSA would be disturbed and mitigation would be required. Intentional or unintentional damage to archaeological sites including the four known sites may occur due to continued vehicular access and OHV use on 1,520 acres of ways and wash bottoms in the southern portion of the WSA. Cultural resource management would continue without regard for protection of other wilderness values.	Little impact to cultural resources is expected under this alternative because potential disturbance would be reduced from 83 to 32 acres and OHV use would not be allowed. Cultural resource management may be limited in scope and execution in order to protect other wilderness values.

SIDS MOUNTAIN/SIDS CABIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (80,084 Acres)	No Action/No Wilderness	All Wilderness (80,970 Acres)
Impacts on Recreation	Primitive recreational opportunities would be directly reduced in quality on the 13 miles (886 acres) of ways, trails, and wash bottoms left for vehicular use in the nondesignated area and 32 acres in the designated area. An indirect reduction in quality of the primitive recreation opportunity would occur on up to 9,518 acres. Both primitive and motorized recreation use would increase, but motorized recreation use would increase to only about half of that expected with the No Action/No Wilderness Alternative. All 18 miles of the San Rafael River, a Wild and Scenic River Inventory Segment, would receive additional protection.	The quality of primitive recreation would be reduced in the southern portion of the WSA and areas where other surface-disturbing activities occur. This could occur directly on 83 acres and indirectly on up to 20 percent (16,194 acres) of the WSA. Both primitive and motorized recreational use would increase by 2 to 7 percent annually over the next 30 years, but vehicles would be restricted to about 27 miles (1,520 acres) of ways and wash bottoms. The northern portion of the WSA would continue to be closed to OHV use. Eighteen miles of the San Rafael River, a Wild and Scenic River Inventory Segment, would not receive additional protection.	Primitive recreational values in the WSA would be preserved overall, and primitive use would increase at a rate of 2 to 7 percent annually over the next 30 years. The quality of the primitive recreational opportunity would be directly reduced on 0.04 percent (32 acres) of the WSA and indirectly reduced on up to an additional 4 percent (3,240 acres) of the WSA. Up to 4,400 visitor days of future annual motorized recreational use that could occur by the year 2020 would be precluded. Because about 20 percent of the existing recreational use is based on vehicular access, overall recreational use would temporarily decline following wilderness designation. The 18 miles of the San Rafael River, a Wild and Scenic River Inventory Segment, would receive additional protection.
Impacts on Economic Conditions	Over the long term, partial wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Approximately 80 fewer jobs would be provided by locatable mineral activities with this alternative. This is equivalent to about 1.2 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $80,360 annually to the local economy at the end of 30 years. Livestock grazing would continue to contribute $48,500 annually in livestock sales and $3,735 in Federal revenues. Up to $47,290 in Federal and State oil and gas lease revenues would be foregone each year. Federal revenues related to commercial recreation would increase. Impacts on the local economy from restrictions on consumptive water use on the San Rafael River would be the same as described for the All Wilderness Alternative.	Present economic trends would not be affected. Locatable mineral activity could increase employment in Emery County by 2.4 percent (160 jobs) by the year 2010. Local recreation-related expenditures would contribute up to $89,380 annually to the local economy by the year 2020. Livestock grazing would contribute $48,500 annually in livestock sales and $3,735 in Federal revenues. Present and future oil and gas leases could contribute up to $48,640 annually in Federal and State lease revenues. Federal revenues related to commercial recreation would increase.	Over the long term, wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 80 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $71,340 annually to the local economy at the end of 30 years. Livestock grazing would continue to contribute $48,500 annually in livestock sales and $3,735 in Federal revenues. Up to $48,640 in Federal and State oil and gas lease revenues would be foregone each year. Federal revenues related to commercial recreation would increase. An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on the San Rafael River and its tributaries upstream of the WSA.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

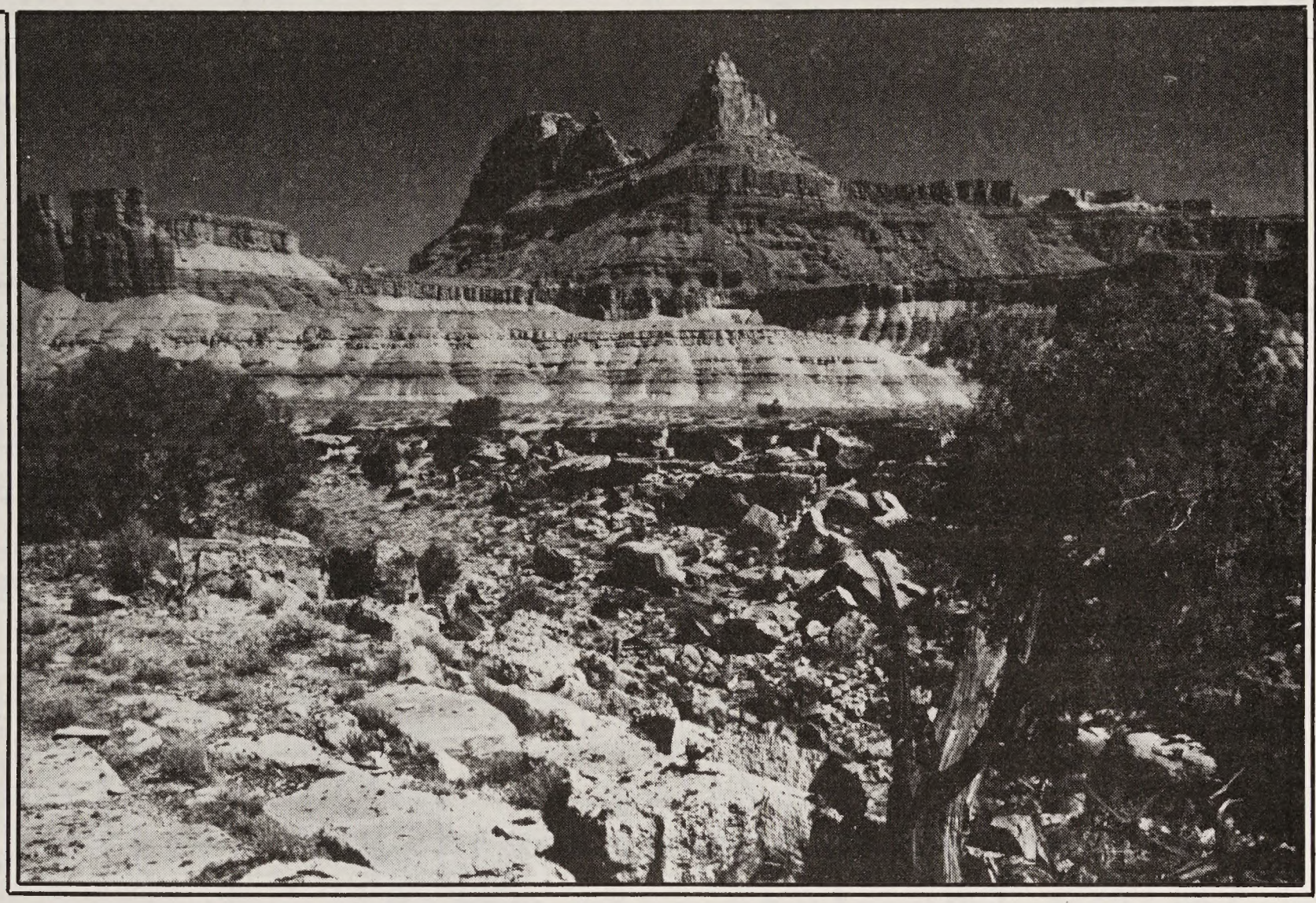
SIDS MOUNTAIN/SIDS CABIN WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 20 S., R. 10 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 20 S., R. 10 E., Sec. 36, W1/2	320.00		State	State	No	Exchange		$1,000
T. 21 S., R. 10 E., Sec. 2	871.44		State	State	No	Exchange		$2,000
T. 21 S., R. 10 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 22 S., R. 10 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Mexican Mountain WSA



R. 11 E.

R. 12 E.

R. 13 E.

MEXICAN MOUNTAIN WSA

Mexican Mountain WSA Proposal UT-060-054

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

T. 20 S.

T. 20½ S.

T. 21 S.

A

B

SAN RAFAEL SWELL

Big Flat Cow Canyon

Cart Canyon

Pack Saddle

Big Hole Gulch

Moonshine Water Hole

Nates Canyon

Salt Mesa

Assembly Hall Peak

Bottleneck Peak

San Rafael Canyon

Window Blind Peak

Red Horse Canyon

White River

Indian Bench

Mexican Mountain

Swazys Leap

Lower Black Box

Sulphur Spring

Tidwell Draw

Thompson Hole

Lockhart Springs Wash

Drowned Hole

Jackass Benches

Spring

Spring

Spring

MEXICAN MOUNTAIN WILDERNESS STUDY AREA

1. THE STUDY AREA: 59,600 acres

The Mexican Mountain Wilderness Study Area (WSA) (UT-060-054) is in Emery County, about 18 miles west of Green River, Utah (population 1,048). The study area is up to 10 miles from north to south and is about 15 miles from east to west. The WSA is east of the Sids Mountain WSA (UT-060-023) and the southern edge is about 1.5 miles north of Interstate Highway 70 (I-70). Most of the boundary is along legal subdivisions, including State lands (see Map).

The San Rafael River, which flows across the WSA from the northwest corner to the southeast corner, forms the southern boundary of a cherrystem for about 3 miles. The cherrystem extends southeastward to exclude a road that nearly reaches Mexican Mountain in the southeastern portion of the WSA (see Map). The WSA contains 59,600 acres of public land administered by the Bureau of Land Management (BLM). Five State sections (2,608 acres) are inheld within the WSA, four of which (2,241 acres) are in the portion recommended for wilderness designation (see Table 1).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	59,600
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	2,608
Total	62,208
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	46,750
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	46,750
In-holdings (State, private)	2,241
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	12,850
Split-Estate	0
Total BLM land not recommended for wilderness	12,850
In-holdings (State, Private)	367

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

MEXICAN MOUNTAIN WILDERNESS STUDY AREA

The WSA is characterized by features resulting from erosion of the multi-colored sedimentary rocks of the eastern San Rafael Swell, including the slopes of the San Rafael Reef on the eastern edge of the WSA: vertical cliffs, buttes, ridges, alcoves, and pinnacles. The San Rafael River has cut deeply into the limestones and sandstones in the southeastern portion of the WSA to form narrow, deep canyons known as the Upper and Lower Black Boxes. Large, isolated erosion remnants such as Mexican Mountain are distinctive in the southeastern part of the WSA. Elevations in the WSA range from 4,700 feet on the San Rafael River in the southeast, to 6,900 feet on Mexican Mountain. Almost half of the WSA is barren or has only scattered plant cover. Pinyon-juniper dominates about one-third of the WSA, with brush and grass on the remainder of the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 46,750 acres would be designated as wilderness and the remaining 12,850 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan includes 16,160 acres of the Mexican Mountain WSA in the San Rafael Canyon (middle and lower portions) Area of Critical Environmental Concern (ACEC) to protect scenic values. Special management requirements now in effect within the lower portion of the ACEC include closing the area to off-highway vehicle (OHV) use, management of the area to meet Class I visual resource management (VRM) guidelines, closure to oil and gas leasing, and proposed withdrawal from locatable mineral entry, where consistent with valid existing rights. Restrictions in the middle portion of the ACEC include limiting OHV use to designated roads and trails.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   46,750 acres
   (recommended for wilderness)
   12,850 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate 46,750 acres as wilderness and to release the remaining 12,850 acres for other uses. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the portion of the WSA that is recommended for wilderness designation meets the naturalness criterion and has outstanding opportunities for solitude and primitive recreation. Special features are scenic, geologic, archaeological, historical, ecologic, and wildlife values. The Black Boxes, two incised gorges on the San Rafael River, are noted features. About 34 miles of the San Rafael River flows through the study area.

Approximately 16,160 acres of the area recommended for wilderness designation are in the San Rafael Canyon ACEC where restrictions on OHVs and mineral and energy exploration and production would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

The water of the San Rafael River is not fully appropriated. Therefore, conflict over water rights could ensue from wilderness designation. Additionally, the BLM notes that designation of the WSA could result in restrictions on future water consumptive developments on the river and its tributaries upstream of the WSA, with resultant impacts on the economy of Emery County. Because of the uncertain nature of the impacts, BLM

recommends that a portion of the WSA be designated wilderness with special provisions for protection of potential upstream water uses.

There is high potential for moderate-sized uranium/vanadium deposits. However, these would probably be subsurface deposits that would require considerable drilling to locate and would be expensive to mine.

Some future development is possible, but similar deposits may be found elsewhere in the vicinity and the Mexican Mountain area probably would not be essential for future supplies of uranium.

Over half of the WSA is currently closed to OHV use, and use is limited to designated roads and trails on the remainder of the WSA. No conflicts exist with other land or resource uses.

The area not proposed for wilderness designation is generally accessible from or near areas used for vehicular recreation. The land adjacent to the county road in Buckhorn Draw and east to the Prickly Pear Flat area and Red Canyon (Area A) is not proposed for wilderness designation as it would be very difficult to keep OHVs out of this open area along a main road. This area has traditionally been used for vehicle camping and the BLM recommends that this use be allowed to continue.

The area south of the San Rafael Campground and east along Indian Bench to Mexican Bend (Area B) has also been used traditionally for vehicular recreation, and is not recommended for wilderness designation.

BLM recommends that the wilderness boundary in T. 20.5 S., R. 13 E., Sec. 35 be set back approximately 200 feet from the vehicle route to Mexican Bend, instead of following the section line as shown in the Final EIS in order to conform with the present alignment of the vehicle route. The map also reflects a correction to T. 21 S., R. 13 E., Sec. 36. The Final EIS map showed the southeastern corner of the section within the area recommended for wilderness. However, the entire section should be outside of the area recommended for wilderness as it is not public land. These small changes from the Final EIS are within the margin of error of the acreage estimate for the WSA, hence the reported acreage has not been changed.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. All imprints together affect less than 3,000 acres (5 percent) of the WSA. These imprinted areas meet the naturalness criterion for areas under wilderness review since the imprints are not substantially noticeable in the WSA as a whole. The other 95 percent of the WSA also meets the naturalness criterion because it is free of imprints.

Imprints are minimal within the WSA. Two short gap fences of about 0.75 of a mile and 0.50 mile cross the river road. There are also two reservoirs along the road and two short ways, leading south toward views of the Black Box. Two short ways also reach the Black Box from the south. The one west of Lockhart Box is a 0.25 miles long. The other is a 0.5 mile loop north of Jackass Benches. From the end of the river road, extending about 4 miles around Mexican Bend, are an abandoned access way, drill site, and air strip. In 1984 about 2.5 miles of the way was bladed without authorization. After this action was discovered, the road bed was scarified and seeded. Reclamation was not fully successful but a road barrier was constructed to prevent additional vehicle use. Another way of about 0.5 mile enters the WSA to a point west of Swasey's Leap. This way is now closed to OHV use due to ACEC restrictions. West of Oil Well Draw and south of the San Rafael Campground there are concentrations of OHV tracks. There is also one small mineral prospect in Red Canyon.

B. Solitude

Overall, about 90 percent of the WSA (53,600 acres) provides outstanding opportunities for solitude, because of the terrain, vegetation, and configuration of the study area. In approximately 6,000 acres, including the area west of Red Canyon and along segments of the river road, the opportunities for solitude are less than outstanding due to configuration and the sights and sounds of vehicles.

Vegetation complements terrain in providing screening that enhances opportunities for solitude. This occurs primarily in two tree-dominated vegetation types, pinyon-juniper woodland and riparian. The pinyon-juniper type occurs in approximately 34 percent of the WSA and contributes significantly to solitude where it is interwoven among the rocky hummocks in the northern portion of the WSA. In addition, there are several small pockets of tree dominated riparian vegetation in canyon bottoms.

The configuration of the WSA and the terrain east of Red Canyon promote opportunities for solitude. The entrenched meanders of the Black Box and its tributaries are so deep and narrow that they provide isolation from activities above. Terrain plays a similar role elsewhere in the WSA. The WSA includes about 60 miles of canyons.

By contrast, the configuration of the WSA west of Red Canyon limits opportunities for solitude, particularly when OHVs are being used in this portion of the WSA and outside its boundaries. This portion of the WSA includes two strips of land ranging from a 0.25 mile to 3 miles wide with surface features not conducive to solitude.

The only off-site influences affecting opportunities for solitude are OHV recreation and the occasional surface collection of building stone. These activities occur along the boundaries of the WSA and are concentrated around the San Rafael Campground and along the San Rafael River road. The opportunity to find a secluded spot in the immediate vicinity of these areas is limited.

C. Primitive and Unconfined Recreation

Primitive recreation opportunities for which the WSA is best suited include hiking, camping, floatboating/tubing, and sightseeing activities related to the WSA's scenic, cultural, and nongame wildlife features. Based on these activities, the entire WSA (59,600 acres) provides outstanding opportunities for primitive recreation.

Opportunities for fishing and hunting, while present, are very limited due to very small game populations and poor productivity. Horseback activities could potentially occur in the WSA, but would be confined by terrain.

D. Special Features

The natural features of the WSA primarily result from its geology. Cuestas, buttes, pinnacles, alcoves, and at least one prominent natural arch occur in the WSA. Only a few canyons in Utah can be compared to the entrenched, very narrow gorges of the Black Boxes of the San Rafael River. The combination of geologic surface features present is not found to the same extent anywhere else in the San Rafael Swell.

The oldest rock exposed in the San Rafael Swell is the White Rim or Coconino Sandstone, in the Black Boxes. It is exposed elsewhere in Utah, although not in a similar gorge. The hummocks in the Navajo Sandstone north of the San Rafael River are also unusual. The San Rafael Reef, which also extends through two other WSAs to the south (San Rafael Reef and Crack Canyon WSAs), is remarkable because of its steep pitches. In Mexican Mountain WSA it begins at its base with steeply dipping Carmel and Entrada sandstones cut by narrow clefts and rises to pitched Navajo Sandstone points or sandstone hummocks.

Approximately 92 percent of the WSA is rated as outstanding for scenic quality.

The ruggedness of the terrain contributes to its suitability as nesting habitat for raptors, habitat for desert bighorn sheep, and scenic interest. The San Rafael River runs through the WSA, cutting deep canyons and providing an

important perennial water source with its riparian vegetation.

The potential exists in the WSA for unusual historical sites, given the known combination of sites and activities in the immediate vicinity of the WSA, including the Old Spanish Trail, the Old Railroad Grade, historical agriculture, and use by outlaws.

Special wildlife habitat features in the WSA include springs, the San Rafael River, riparian associations, a cliff line suitable for raptor nesting, and at least one bighorn sheep cave. The WSA has small populations of cougar and desert bighorn sheep, which are wildlife species associated with wilderness. Black-footed ferrets, peregrine falcons, and bald eagles, listed as endangered species, and nine additional animal species considered sensitive may inhabit or frequent the WSA. Two plants, Maguire Daisy (Erigeron maguirei var. maguirei) and Wright fishhook cactus (Sclerocactus wrightiae), which are listed as endangered species, occur or may occur in the WSA. Also, two threatened species, the Jones Cycladenia (Cycladenia humilis var. jonesii) and the Last Chance Townsendia (Townsendia aprica), and five other plant species that are considered sensitive may occur in or near the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (35,760 acres) and saltbush-greasewood (23,840 acres).

Both types of PNV are represented in the NWPS nationally and in Utah and in other BLM study areas. This information is summarized in Table 2 from data compiled in December 1989.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,108,245
Saltbush-Greasewood	1	20,000	17	370,163
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,670,438
Saltbush-Greasewood	1	20,000	17	370,163

Source: BLM File Data.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Mexican Mountain WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,200,075
Provo-Orem, Utah	11	721,793	90	2,727,268

Source: BLM File Data.

A Mexican Mountain Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres. There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U.S. Forest Service [FS]) to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness designation can be managed as wilderness to preserve values now present in the area, and to avoid conflicts with traditional OHV access routes. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. A herd of about 10 to 15 head of wild horses would continue to use part of the WSA, where management actions would continue as at present.

Even though there are 1,120 acres of post-FLPMA oil and gas leases in the WSA (480 acres are in the recommended area), the leases are subject to stipulations for protection of wilderness values and it is expected that they will expire and not be renewed.

There are 1,400 acres of mining claims in the recommended portion of the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 16 acres in the recommended portion of the WSA following wilderness designation, but this would not affect the overall manageability of the area. The presence of four in-held State sections (2,241 acres) scattered through the recommended part of the study area could create additional manageability problems because BLM would be required to provide reasonable access to State land and would have no control over activities on State land. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration

and development on State land could reduce wilderness values in small portions of the recommended wilderness.

About 693 acres of public water reserve withdrawals would be compatible with wilderness management and would remain in effect following wilderness designation.

The 12,850-acre area not recommended for wilderness designation also could be managed as wilderness, although it would be more difficult to do so. There are 820 acres of mining claims and one section of State land (367 acres) in this portion of the WSA where uranium exploration and development could disturb about 16 acres. In addition, OHV use would be administratively difficult to control in the area not recommended for wilderness because of ease of access and traditional vehicle use patterns. Offsite influences from vehicle use on adjacent roads would be evident in portions of the area not recommended for wilderness.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the Mexican Mountain WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., 1990). The report indicates that commodities that were evaluated included gypsum, geothermal energy, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, sulfur, petrified wood, and tar sand.

The mineral resource potential is high for localized, thin tar sands of variable grade. The resource potential for gypsum on the surface is high in the northeastern part of the WSA. The northeastern part of the Mexican Mountain WSA has high resource potential for uranium and vanadium in the Chinle Formation. The resource potential is moderate for oil and gas, geothermal energy, and for carbon dioxide and helium gases. The resource potential is low for metals other than uranium and vanadium, including gold and copper, and for minor, localized sulfur deposits. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the northeastern part of the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, partial wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Approximately 20 fewer jobs would be provided by locatable mineral activities with this alternative. This is equivalent to about 0.3 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $142,900 annually at the end of 30 years. Livestock grazing would continue to contribute $36,180 annually in livestock sales and $42,786 in Federal revenues. Up to $54,040 in Federal and State lease revenues would be foregone each year.

An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on the San Rafael River and its tributaries upstream of the WSA.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 390 inputs specifically addressing this WSA were received from 1,074 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature

or testimony regardless of the number of inputs. In general, 157 commenters supported wilderness designation for part or all of the WSA, while 475 commenters were opposed. Four hundred and forty-two commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values and special features in the WSA. The majority of those commenting in favor of wilderness were from urban Utah and other states. Of particular concern was the need to protect wilderness values in the WSA from OHV use.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict livestock management and public access, wilderness is not compatible with multiple use, would harm local and State economies, and would cause Federal air quality designation in the region to become more stringent. Most of those opposing wilderness designation were from rural Utah.

One federal agency, the USBM, commented on the Draft EIS for this WSA. The USBM expressed no opinion regarding wilderness designation but stated that BLM underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are five sections of State land (2,608 acres) within the WSA. The State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding this WSA. The State commented that the WSA ranks high for wilderness values and high for significance of conflicts compared with other WSAs in the San Rafael Region. The State noted that the major conflicts with mining and livestock uses are mostly eliminated or reduced by the Partial Wilderness Alternative; however, significant conflicts with water resource development are not reduced. The development of a dam site is irreconcilable, but the high wilderness values in the area need to be considered in the decisionmaking process. Other specific State comments on the Draft EIS dealt with mapping mistakes, the location of tar sand, and long-term versus short-term economic potential for uranium development.

The Mexican Mountain WSA is in Emery County. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that wilderness designation would be in conflict with the County Master Plan. The Commission believes that the mineral potential of the WSA is higher than described in the EIS; that the State inholdings will compromise the manageability of the area; and that wilderness designation would lead to more restrictive air quality standards and Federal Reserved Water Rights that would devastate the economy of Emery County.

MEXICAN MOUNTAIN WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation Partial Wilderness (46,750 Acres)	No Action/No Wilderness	All Wilderness (59,600 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 78 percent of the WSA. Naturalness and opportunities for solitude and primitive recreation would be directly lost on 34 acres because of mineral exploration and development, construction of access roads to in-held State lands, and rangeland projects. Opportunities for solitude and primitive and unconfined recreation would be indirectly reduced in quality on up to 2,980 acres. Direct and indirect loss of naturalness due to OHV activity could also occur on up to 5,960 acres of the WSA. Overall, the quality of opportunities for solitude and primitive recreation would be indirectly reduced on up to a total of 8,940 acres. Some Class A scenery would be reduced in quality in disturbed and surrounding areas. Vehicular activity in the nondesignated portion including use of 10 of the 20 miles of ways in the WSA would have a negative affect on wilderness-dependent and special status species such as peregrine falcon and bighorn sheep, and on cultural values. Monitoring and enforcement of protective measures would be necessary. Wild and scenic river values would receive additional protection on 26 of the 34 miles of the San Rafael River in the WSA.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 80 acres because of mineral exploration and development, construction of access roads to in-held State lands, and rangeland projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 5,960 acres. Although over half of the WSA would remain closed to OHV use, direct and indirect loss of wilderness values due to OHV activity could occur on up to 11,920 acres of the WSA. In total, opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 17,880 acres. Vehicular activity, including continued use of 20 miles of ways, would have a negative affect on wilderness-dependent and special status wildlife species and on cultural values. Monitoring would be necessary. Class A scenery would be reduced in quality in the disturbed and surrounding areas. The wild and scenic river values of the 34 miles of the San Rafael River in the WSA would not receive additional protection.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 20 acres of the WSA because of uranium exploration and development on valid claims, construction of access roads to in-held State lands, and water developments. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 1,192 acres. Special features would be preserved overall except that some Class A scenery would be reduced in quality in disturbed and surrounding areas. The wild and scenic river values of 34 miles of the San Rafael River in the WSA would receive additional protection.

MEXICAN MOUNTAIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (46,750 Acres)	No Action/No Wilderness	All Wilderness (59,600 Acres)
Impacts on Vegetation	Vegetation types and populations of special status plant species would be protected because projected disturbance would be reduced from 80 acres to 40 acres and OHV use would be eliminated on 83 percent of the area. Impacts from OHV use on 10,250 acres would be monitored and corrective measures taken should populations of threatened, endangered, or sensitive species be threatened.	Vegetation types and populations of special status plant species would not be significantly affected because the 80 acres of projected disturbance would affect 0.1 percent of the vegetation in the WSA. Impacts from OHV use on 29,000 acres would be monitored and corrective measures taken should populations of threatened, endangered, or sensitive species be jeopardized.	Vegetation types and populations of threatened, endangered. or other special status plant species would be protected by this alternative because projected disturbance would be reduced from 80 acres to 20 acres and OHV use would be eliminated. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.
Impacts on Water Resources	Impacts and conclusions for water resources would be essentially the same as for the All Wilderness Alternative because only 34 acres of the WSA would be disturbed and 26 of the 34 miles of the San Rafael river in the WSA would be in the designated area.	This alternative would not alter present or future water quality or uses. Only 0.1 percent (80 acres) of the WSA would be disturbed and there would be no restrictions on water use imposed by wilderness management.	In the short term, wilderness designation would not significantly alter water quality or uses because only 20 acres of the WSA would be disturbed. In the long term, future water diversions and new consumptive uses in the San Rafael River system upstream of the WSA may be restricted or precluded.
Impacts on Mineral and Energy Exploration and Development	Impacts would be slightly less than with the All Wilderness Alternative because 22 percent of the WSA would not be designated wilderness. Oil and gas exploration and an unknown amount of uranium production would be foregone.	Implementation of this alternative would not adversely affect mineral and energy resource exploration and production in the Mexican Mountain WSA because mineral leasing, lcoation of mining claims, and mineral developments would not be restricted for protection of wilderness values. In the San Rafael Canyon (lower portion) ACEC, plans of operation would continue to be required on all valid claims, no oil and gas leases would be issued, and the area would be proposed for withdrawal from locatable mineral entry.	Oil and gas exploration opportunities would be foregone. Wilderness designation would limit exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. An unknown portion of the uranium in the WSA would be foregone. No other significant locatable or leasable mineral production would be lost.

MEXICAN MOUNTAIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (46,750 Acres)	No Action/No Wilderness	All Wilderness (59,600 Acres)
	Alternatives		
Impacts on Wildlife Habitat and Populations	Approximately 0.6 percent (34 acres) of the habitat in the WSA would be disturbed. Wildlife habitat or populations, including special status animal species would not be significantly affected by locatable mineral and new access development. OHV use would impact bighorn sheep and raptor habitat in the nondesignated area without necessary monitoring and enforcement. Approximately 1,000 acres of peregrine and other raptor nesting habitat and 1,000 acres of bighorn sheep habitat could be affected.	Only about 0.1 percent (80 acres) of the wildlife habitat in the WSA would be disturbed. This would not significantly affect wildlife habitat or populations. OHV use on designated roads and trails could impact bighorn sheep and raptor habitat. The monitoring and enforcement of OHV use and enforcement of protective measures would be necessary.	Approximately 0.03 percent (20 acres) of the wildlife habitat in the WSA would be disturbed. Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term. This would be especially beneficial to peregrine falcons on 31,700 acres of peregring falcon nesting habitat and to desert bighorn sheep.
Impacts on Livestock Management	This alternative would not result in a change in the level of livestock use but would cause a change in the method of livestock management and supervision with restrictions on access to about 10 miles of way. This would cause inconvenience and increase management costs for 13 livestock permittees.	Existing levels of grazing use and current management practices would not be affected because access, grazing levels, and management techniques would remain as at present.	Restrictions on access to 20 miles of ways would necessitate changes in livestock management and supervision and cause inconvenience and increased management costs for 15 livestock permittees.

MEXICAN MOUNTAIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (46,750 Acres)	No Action/No Wilderness	All Wilderness (59,600 Acres)
Impacts on Cultural Resources	Archaeological sites including all of the recorded sites would be protected by wilderness designation with this alternative. Sites in the nondesignated portion would continue to be protected under existing laws, but some inadvertent damage to sites from OHV use would occur.	Impacts due to surface disturbance are expected to be minimal because only 0.1 percent (80 acres) of the WSA would be disturbed and mitigation would be required. Intentional or unintentional damage to archaeological sites including two recorded sites, may occur due to continued vehicular access and OHV use. Up to 20 percent (11,920 acres) would be affected. Cultural resource management would continue without regard for protection of other wilderness values.	Very few impacts to cultural resources are expected with this alternative because potential disturbance would be reduced from 80 acres to 20 acres and OHV use would not be allowed. Overall, cultural resources would be protected but cultural resource management may be limited in scope and execution in order to preserve other wilderness values.
Impacts on Recreation	Primitive recreational values would be preserved overall in the designated portion of the WSA. The quality of the primitive recreational opportunity would be directly reduced on 0.06 percent (34 acres) of the WSA and indirectly reduced on 5 percent (8,490 acres). Both primitive and motorized recreational use would increase to reach a total of as much as 34,860 visitor days per year by the year 2020. Twenty-six of the 34 miles of the San Rafael River, a wild and scenic river inventory segment on the WSA would receive additional protection.	The quality of primitive recreation would be reduced on and near OHV use areas and areas where other surface-disturbing activities occur. This could occur directly on 80 acres and indirectly on up to 30 percent (17,880 acres) of the WSA due to sights and sounds of OHV use and mineral exploration and development. Both primitive and motorized recreational use would increase by 2 to 7 percent annually over the next 30 years. Over half of the WSA would be closed to OHV use, and use would be limited to designated roads and trails on the remainder of the WSA. Thirty-four miles of the San Rafael River, a wild and scenic river inventory segment, would not receive additional protection.	Primitive recreational values would be preserved over most of the WSA. The quality of the primitive recreational opportunity would be directly reduced on 0.03 percent (20 acres) of the WSA and indirectly reduced on 2 percent (1,192 acrs). Primitive recreational use would increase from the present 1,500 visitor days per year to up to 13,060 visitor days while up to 21,800 motorized visitor days per year would be foregone by the year 2020. Thirty-four miles of the San Rafael River, a wild and scenic river inventory segment, would receive additional protection.

MEXICAN MOUNTAIN WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (46,750 Acres)	No Action/No Wilderness	All Wilderness (59,600 Acres)
Impacts on Economic Conditions	Over the long term, partial wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/ No Wilderness Alternative. Approximately 20 fewer jobs would be provided by locatable mineral activities with this alternative. This is equivalent to about 0.3 percent of the projected Emery County employment in the year 2010. Recreation-related expenditures could contribute up to $142,900 annually at the end of 30 years. Livestock grazing would continue to contribute $36,180 annually in livestock sales and $2,786 in Federal revenues. Up to $54,040 in Federal and State lease revenues would be foregone each year. Impacts on the local economy from restrictions on consumptive water use on the San Rafael River would be the same as described for the All Wilderness Alternative.	Present economic conditions would not be affected. Locatable mineral activity could increase employment by 1.2 percent (80 jobs) by the year 2010. Recreation-related expenditures would contribute up to $142,926 annually to the local economy by the year 2020. Livestock grazing would contribute $36,180 annually in livestock sales and $2,786 in Federal revenues. Present and future oil and gas leases could contribute up to $77,600 annually in Federal and State lease revenues.	Over the long term, wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 40 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $53,546 annually at the end of 30 years. Livestock grazing would continue to contribute $36,180 annually in livestock sales and $2,786 in Federal revenues. Up to $77,600 in Federal and State lease revenues would be foregone each year. An unquantified but potentially significant adverse effect on the Emery County economy could result from restrictions on consumptive use of water on the San Rafael River and its tributaries upstream of the WSA.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

MEXICAN MOUNTAIN WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 20 S., R. 12 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 20 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 20 S., R. 13 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 20 S., R. 13 E., Sec. 32	320.68		State	State	No	Exchange		$1,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Jack Canyon WSA



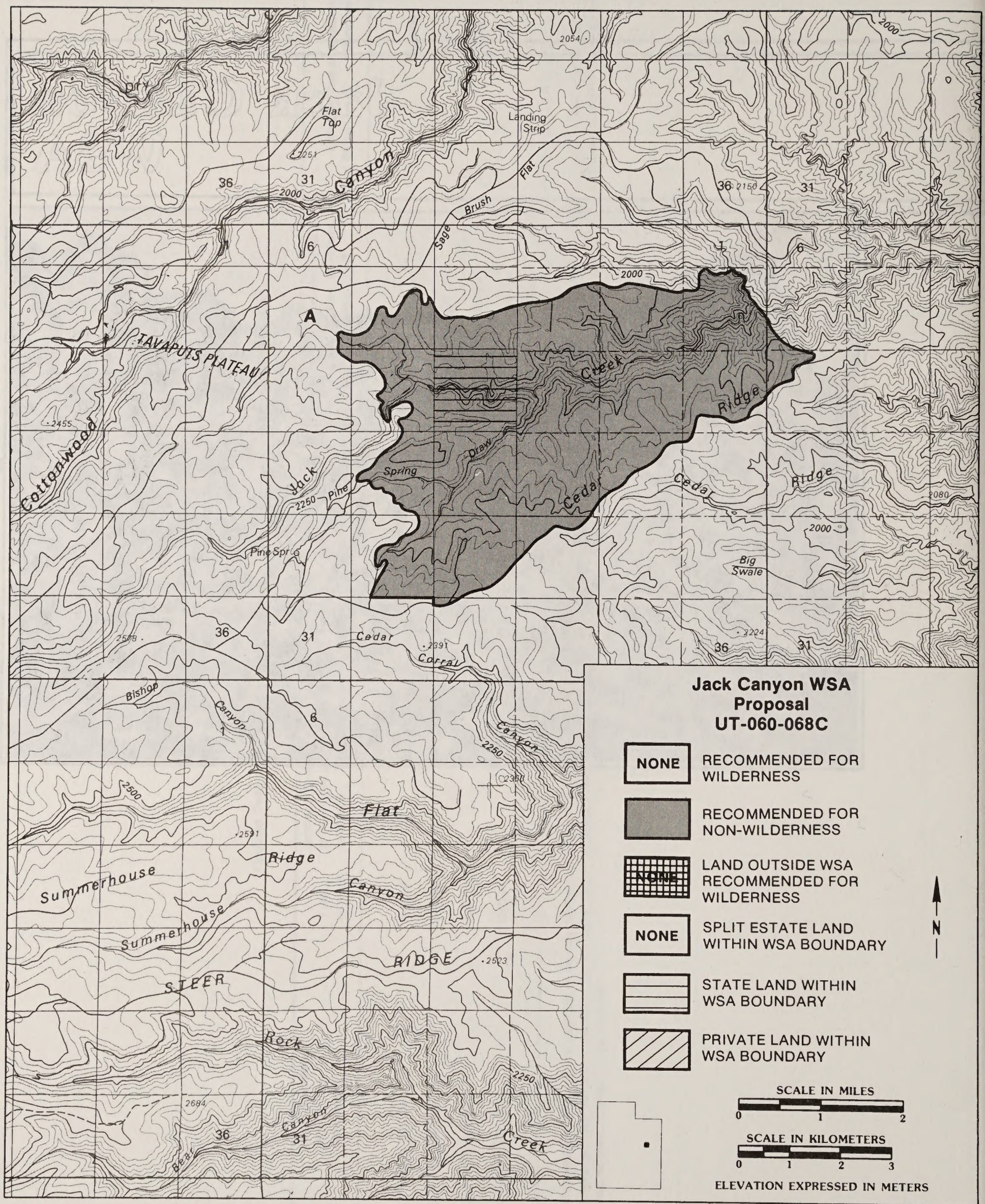
JACK CANYON WSA

R. 15 E.

R. 16 E.

T. 13 S.

T. 14 S.



October 1991

JACK CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 7,500 acres

The Jack Canyon Wilderness Study Area (WSA) (UT-060-068C) is in Carbon County, about 15 miles northeast of East Carbon City, Utah (population 1,942) and Sunnyside, Utah (population 611). The unit extends about 6 miles from northeast to southwest and about 4 miles from northwest to southeast. The WSA is separated from the Desolation Canyon WSA (UT-060-068A), to the south and east, by a road along Cedar Ridge and a pipeline route. The western and northern edges of the study area are along roads (see Map). The WSA contains 7,500 acres of public land administered by the Bureau of Land Management (BLM).

One State section (640 acres) and one parcel of private land (40 acres) are inheld within the WSA (see Table 1). The WSA is on the Tavaputs Plateau, a high section of the east-west trending Roan Cliffs. Jack Canyon is a tributary of the Green River, to the east of the WSA.

The terrain in the WSA is characteristic of the highly dissected Roan Cliffs, and includes both vertical-sided and V-shaped canyons, steep tributary draws, and narrow irregular ridges. Elevations range from 5,200 feet in Jack Creek, at the eastern edge of the WSA, to 8,900 feet at the southwestern tip of the WSA.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	7,500
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	680
Total	8,180
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	7,500
Split-Estate	0
Total BLM land not recommended for wilderness	7,500
In-holdings (State, Private)	680

Source: BLM File Data

Pinyon-juniper woodland, mixed with sagebrush on the benches and moderate slopes and with Douglas fir on steep slopes and north-facing slopes, is the dominant vegetation.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: a no wilderness (no action) alternative which is the recommendation in this report, and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
   0 acres
   (recommended for wilderness)
   7,500 acres
   (not recommended for wilderness)

The recommendation for this WSA is to release the entire area for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The WSA would be released for uses other than as wilderness.

Almost all of the WSA is in a natural state and has outstanding opportunities for solitude and the entire area has outstanding opportunities for primitive recreation. Disturbance projected as a result of oil and gas exploration and development will make it very difficult to maintain the wilderness character of the area as described in the manageability section of this document. The WSA has proven reserves of oil and gas with about 63 percent of the study area being within the Greater Jack Canyon Known Geologic Structure. Several leases in and near the WSA have been unitized to form the Peters Point Unit which is held by production. Oil and gas operations began in this area in 1952. The oil and gas resources outweigh wilderness values for this WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. In all, 7,350 acres meet the naturalness criterion. About 2 percent of the WSA (150 acres), around a drill site access way and pipeline, does not meet the naturalness criterion. The remaining imprints affect another 1 percent of the WSA (75 acres), but these areas meet the naturalness criterion because the imprints are not substantially noticeable in the WSA as a whole.

One area of substantially noticeable imprints within the WSA involves a drill site, access road, and pipeline leading into the WSA from Cedar Ridge. The road is about 0.75 mile long and portions were constructed along side slopes. The drill site is in a grassy opening on a bench between Cedar Ridge and Jack Creek. The site was drilled in 1981 on a pre-FLPMA lease and is currently producing gas. The drill site and road are visible for long distances from the north, and no further reclamation is expected in the near future.

A site in Jack Canyon about a 0.25 mile from the northeast WSA boundary was drilled in 1976. The well produced 11.2 million cubic feet of natural gas before being plugged in 1979. The a 0.25 mile vehicular way to the site is no longer substantially noticeable, but the well site itself noticeably contrasts with the surrounding landscape. Some facilities are still in place and the pad area remains evident. The area affected by this imprint is localized and the imprint is very near the WSA boundary. The site therefore does not impair the naturalness of a significant portion of the WSA when viewed in the area as a whole.

Three old vehicle ways extend into the WSA from the bench road on the northern boundary. An abandoned drill site is along one of these ways. The ways total 1.5 miles. They have generally revegetated. The sections where the ways cut through pinyon-juniper stands are still evident, as is the drill site. These imprints are noticeable in some places, but they are not substantially noticeable in the area as a whole.

B. Solitude

About 97 percent of the WSA (7,275 acres) meets the solitude criterion for areas under wilderness review. In about 3 percent of the WSA (225 acres), along the north and south boundaries, opportunities for solitude are less than outstanding, primarily due to off-site influences.

The combination of distance, configuration, terrain, and vegetation provides solitude in most of the WSA. Vistas can be viewed from edges of plateaus around the boundary of the WSA.

The drainages of Pine Springs Draw and Jack Creek are narrow, sinuous, and steep throughout most of their lengths and are separated by broken and irregular ridge lines. The upper portions of Pine Springs Draw and its forks above 7,000 feet are the most open areas. On the bench areas along the north and south boundaries, the terrain is less severe, but pinyon-juniper provides excellent screening. Several sagebrush areas along boundary roads to the north and south do not provide significant screening.

Vegetation and terrain provide opportunities for solitude in most of the WSA. In 80 percent (6,000 acres) of the WSA, tree cover is a dominant feature in the vegetation. Tree cover in the pinyon-juniper woodland/Douglas fir type often has a closed canopy and is moderate to heavy. Tree cover in the pinyon-juniper woodland/sage community is variable. In most of the locations dominated by these types, trees significantly contribute to opportunities for solitude.

Significant off-site influences are related to past and present oil and gas activity. Oil and gas exploration imprints are quite visible from a number of locations along the northern boundary of the WSA. Vehicle use of the Cedar Ridge Road and the road in Jack Canyon occurs on a regular basis to access producing gas wells. Off-site influences generally affect about 3 percent (225 acres) of the WSA, primarily along its boundaries.

C. Primitive and Unconfined Recreation

Generally, the opportunities for primitive recreation are considered outstanding throughout the entire WSA (7,500 acres) for hiking, climbing, hunting, camping, and sightseeing related to the WSA's scenic, geologic, and wildlife features. Horseback riding could occur, but would be limited due to the steep terrain.

D. Special Features

The Jack Canyon WSA is highly scenic when viewed from the canyon bottoms. Variety throughout the WSA, including variety in vegetation, and the existence of erosional remnants and features, creeks and springs, and wildlife habitat all combine in an interesting and scenic landscape. The archaeological potential of the area is largely unknown, but significant sites are known to be present nearby, outside the WSA, in Nine Mile Canyon and Desolation Canyon.

High-value wildlife habitat in the WSA includes the intermittent stream and spring riparian associations in Jack Creek and Pine Springs Draw, and cliff and talus habitats. The WSA has small populations of Rocky Mountain bighorn sheep, elk, cougar, and black bear, which are wildlife species associated with wilderness. Peregrine falcons and bald eagles, listed as endangered species, may occasionally visit the WSA and eight other animal species that are considered sensitive also may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (3,750 acres) and pine-Douglas fir forest (3,750 acres).

Both PNV types are represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah, standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,140,255
Pine-Douglas Fir Forest	6	125,523	7	15,182
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,702,448
Pine-Douglas Fir Forest	1	45,000	1	1,490

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,252,175
Provo-Orem, Utah	11	721,793	90	2,779,368

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Jack Canyon WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A Jack Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas. There are four designated wilderness areas within 100 miles of the WSA. To the northwest are the 8,922-acre Lone Peak Wilderness (U.S. Forest Service [FS]), the 10,750-acre Mt. Timpanogas Wilderness (FS) and the 28,000-acre Mt. Nebo wilderness (FS), and to the north-northwest is the 456,705-acre High Uintas Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

Only portions of the WSA could be managed as wilderness. Livestock grazing would continue but would not significantly affect wilderness values. However, conflicts with two pre-FLPMA oil and gas leases (2,180 acres) held by production and three post-FLPMA oil and gas leases (1,110 acres) could cause significant adverse impacts to the area's wilderness character following wilderness designation. BLM projects that 11 acres could be disturbed by additional oil and gas exploration and development and that up to 3 miles of road could be built. The opportunities for solitude and primitive recreation would be adversely effected on up to 600 acres of land indirectly impacted by oil and gas exploration activities. One State section (640 acres) and one parcel of private land (40 acres) are located within the WSA. The likelihood of oil and gas exploration and development of the State land is good due to favorable geologic conditions. The State land could create additional manageability problems because BLM would be required to provide reasonable access and would have no control over activities on State land. There are no mining claims in the WSA due to an oil shale withdrawal. Management of off-highway vehicle (OHV) use would not be a problem because of the rugged terrain of the WSA.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for the area. According to BLM geologists, the potential for oil and gas is high, although the total reserves may be moderate because of the small size of the WSA. The potential for coal and tar sand resources is low. The potential for oil shale is moderate. The potential for uranium and other metallic minerals is low. The WSA is within an oil shale withdrawal, which closes the area to mining claim location.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended no wilderness alternative, there would not be significant changes in economic conditions in Carbon County. Oil and gas exploration and development could increase employment in Carbon County by 0.3 percent (40 jobs). The probability of economic development of minerals, other than oil and gas, is low in the foreseeable future. The WSA could contribute up to $3,576 annually in local sales related to recreation by the year 2020. Livestock grazing in the WSA could provide $4,320 per year in livestock sales and $333 in grazing fees. Oil and gas and leasing fees and royalty payments could contribute between $15,000 and $100,000 per year in Federal and State revenues depending on production levels.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and

alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 55 inputs specifically addressing this WSA were received from 53 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 43 commenters supported wilderness designation for part or all of the WSA, while 3 commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the opportunities for primitive recreation in the WSA. The majority of those commenting in favor of wilderness were from other states. Of particular concern was that wilderness designation would protect wilderness values and wildlife habitat in the WSA.

Those opposing wilderness were concerned that wilderness would prohibit mineral exploration and development. Those opposing wilderness designation were from urban and rural Utah and from another state.

No Federal agencies commented specifically on the Draft EIS for this WSA.

No comment letters were received on the Final EIS.

There is one State section (640 acres) in the WSA. In commenting on the Draft EIS the State of Utah expressed general opposition to wilderness designation. The State commented that Jack Canyon WSA has low wilderness quality values and moderate conflicts compared to other WSAs in the region, pointing out the current gas production within the WSA. Other comments noted concern that wildlife and livestock values could be enhanced more by the no action alternative due to potential vegetation treatments.

The WSA is in Carbon County. According to the Carbon County Commission the area with the WSA is zoned as Critical Environmental 1 (CE-1) where the land use objectives are to protect water supplies, vegetation, soils, wildlife, aesthetics and other natural resources. The Carbon County Commission is opposed to wilderness designation for the WSA, and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that the WSA has substantial oil and gas potential and visible imprints of man's activities. The Commission further stated that the natural values in the area may be protected by county zoning or designation of the WSA as an Area of Critical Environmental Concern by BLM.

JACK CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

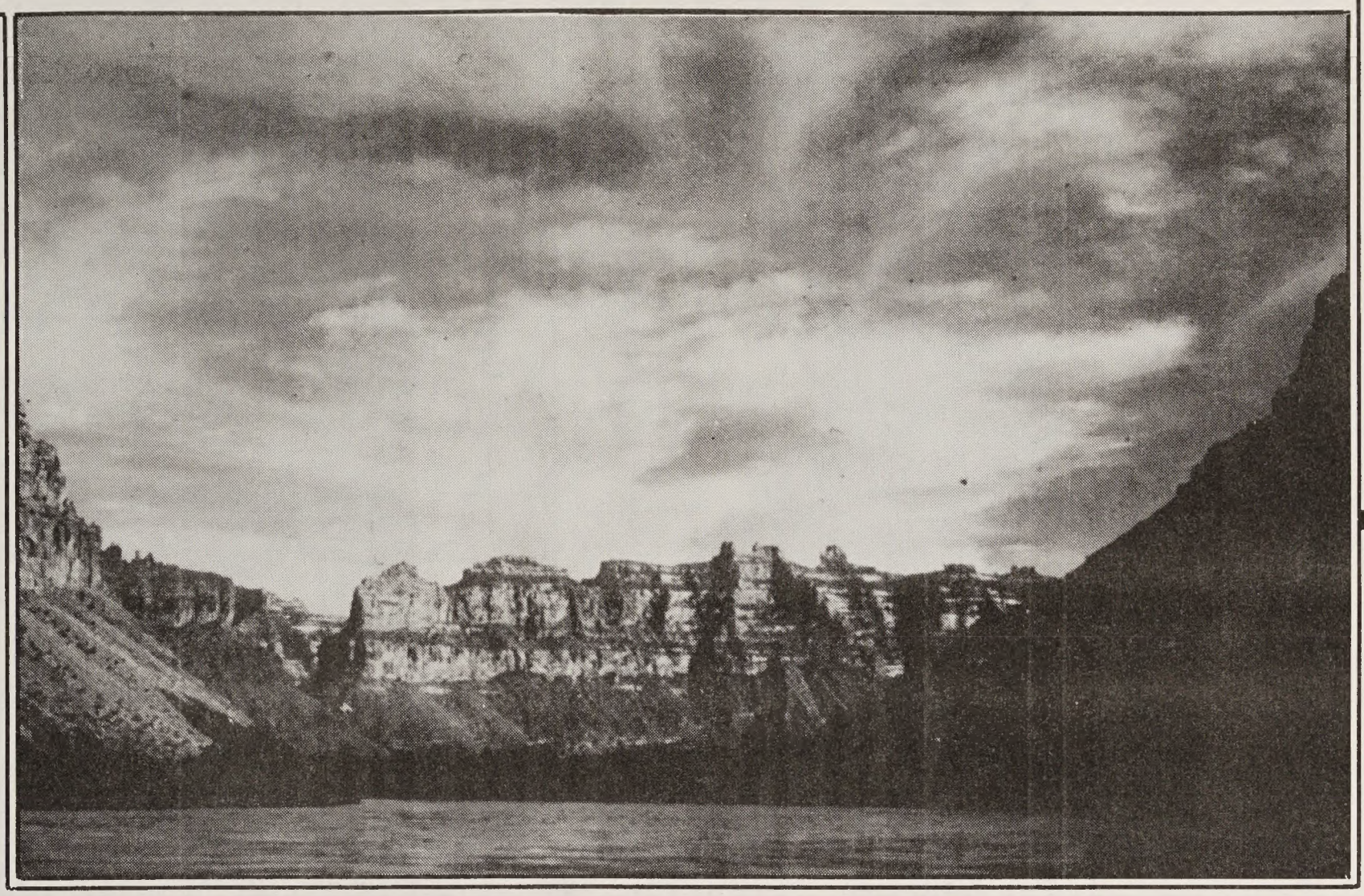
Issue Topic	Alternatives: Recommendation No Action/No Wilderness	Alternatives: All Wilderness (7,500 Acres)
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on up to 161 acres of the WSA because of oil and gas development and construction of access to a State in-holding. The quality of opportunities for solitude and primitive recreation would be indirectly reduced on up to an additional 3,750 acres. Endangered or threatened species would not be significantly affected. Class A scenery and wildlife associated with wilderness would be disturbed. Vehicular use of ways and future oil and gas exploration and development roads would occasionally detract from the quality of opportunities for solitude and primitive recreation in the WSA.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 11 acres of the WSA because of oil and gas development and construction of access to State in-holdings. The quality of opportunities for solitude and primitive recreation would be indirectly reduced on up to an additional 600 acres. Special features would be preserved. Although some Class A scenery would be reduced in quality in the disturbed and surrounding areas.
Impacts on Mineral and Energy Resources	Implementation of this alternative would not adversely affect oil and gas exploration and production in the WSA because leasing and development would not be restricted for protection of wilderness values.	The current production of natural gas from pre-FLPMA leases would not be affected. Production of locally significant but unquantifiable amounts of oil and natural gas would be foregone. There would not be a significant loss of tar sand, oil shale, locatable minerals, or salable minerals within the WSA because the probability of development is low even if the area is not designated wilderness.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	 All Wilderness (7,500 Acres)
Impacts on Wildlife Habitat and Populations	Surface disturbance caused by potential mineral exploration could displace some wildlife species during the lifetime of the disturbance. Additional impacts could occur to sensitive big game species such as elk and bighorn sheep. Impacts on threatened, endangered, or other special status species would not be significant because only 2 percent of the WSA would be disturbed, activities would be temporary and mitigation would be required.	About 0.02 percent of the habitat in the WSA would be disturbed. Wilderness designation would protect wildlife and provide additional solitude. Threatened, endangered, and other special status species would be protected.
Impacts on Economic Conditions	Present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Carbon County by 0.3 percent (40 jobs) as compared to projected employment by the year 2010. There would be only minor changes in local economic conditions. The WSA could contribute up to $3,576 annually in local sales related to recreation by the year 2020. Livestock grazing in the WSA would continue to provide about $4,320 per year in livestock sales and $333 in grazing fees. Oil and gas leasing fees and royalty payments could contribute between $15,000 and over $100,000 per year in Federal and State revenues depending on production levels.	The potential for about 0.2 percent of the projected Carbon County employment in the year 2010 (30 jobs), would be foregone. This would not significantly affect local economic conditions. Annual local sales related to recreation could be up to $2,160 per year by the year 2020. This would be about $886 less than with the No Action/No Wilderness Alternative. Livestock grazing would continue to contribute about $4,320 per year in livestock sales and $333 in Federal revenues. Annual Federal and State revenues from oil and gas leasing fees and royalty payments could be reduced by between $10,640 and over $100,000 as compared to the No Action/No Wilderness Alternative.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

Desolation Canyon WSA



DESOLATION CANYON

R. 15 E. R. 16 E. R. 17 E. R. 18 E.

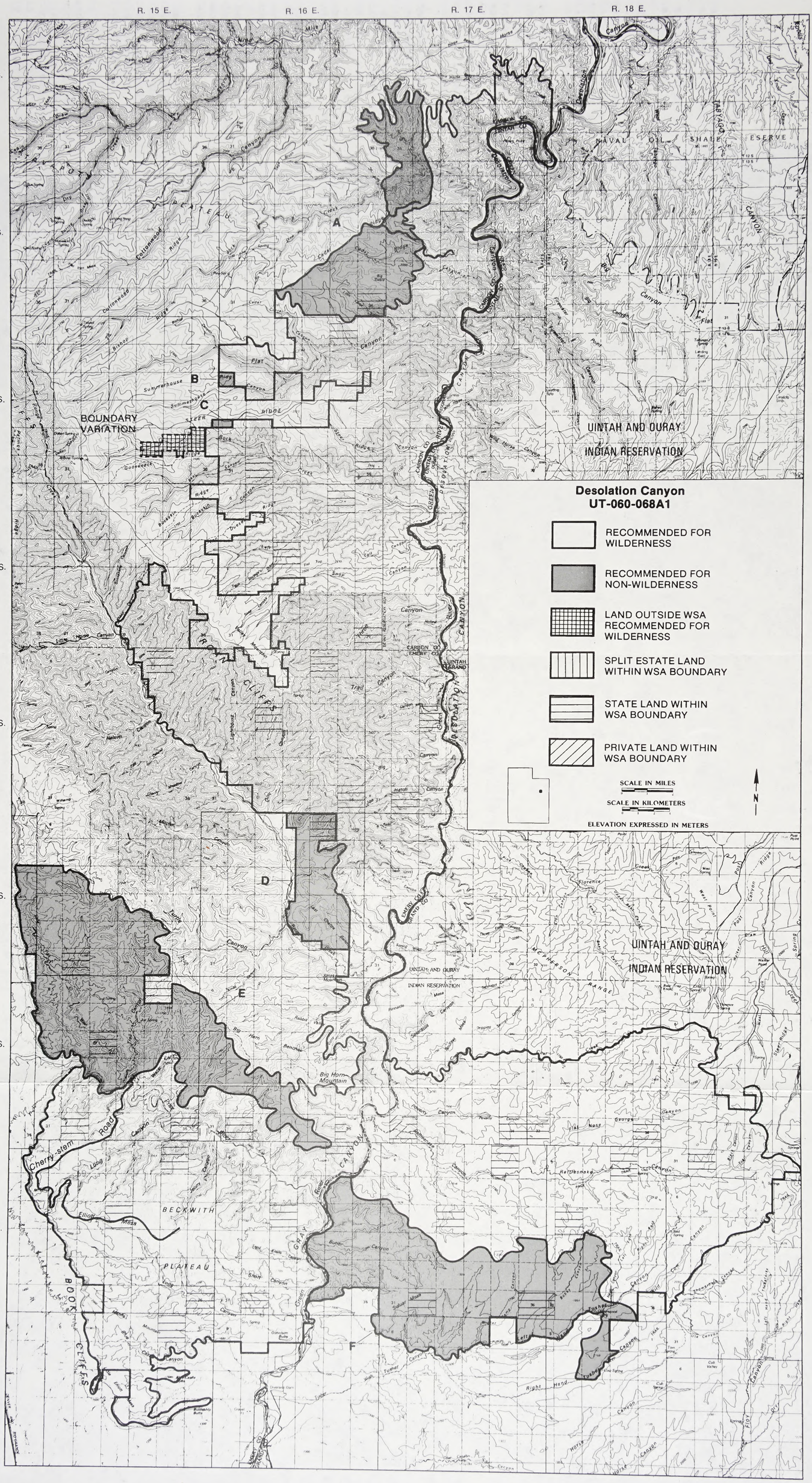
T. 12 S.

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October 1991


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R. 16 E.
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T. 13 S.
T. 14 S.
T. 15 S.
T. 16 S.
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T. 18 S.
T. 19 S.
T. 20 S.
A
B
C
D
E
F
BOUNDARY VARIATION
UINTAH AND OURAY INDIAN RESERVATION
NAVAL OIL SHALE RESERVE
Desolation Canyon
UT-060-068A1
RECOMMENDED FOR WILDERNESS
RECOMMENDED FOR NON-WILDERNESS
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
SPLIT ESTATE LAND WITHIN WSA BOUNDARY
STATE LAND WITHIN WSA BOUNDARY
PRIVATE LAND WITHIN WSA BOUNDARY
SCALE IN MILES
SCALE IN KILOMETERS
ELEVATION EXPRESSED IN METERS
N
Big Horn Mountain
Cherry-stem Road
BECKWITH PLATEAU
BOOK CLIFFS
TAVAPUT CANYON
PRISON CANYON
DESOLATION CANYON
McPHERSON RANGE

DESOLATION CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 290,845 acres

The Desolation Canyon Wilderness Study Area (WSA) (UT-060-068A) is in parts of Carbon, Emery, and Grand Counties, about 6 miles north of Green River, Utah (population 1,048), and about 8 miles east of Sunnyside, Utah (population 1,942) and East Carbon City, Utah (population 611). The WSA encompasses about 450 square miles and is the largest WSA in Utah. It extends about 50 miles from north to south and from 1 mile to 28 miles from east to west, and is shaped like an inverted "T".

The Green River forms most of the eastern boundary of the study area, except in the south in the vicinity of Gray Canyon, where the WSA includes part of the Beckwith Plateau on the west and part of the upper Book Cliffs on the east (see Map). Most of the rest of the boundary is along legal subdivisions and breaks in terrain.

The WSA contains 289,650 acres of public land administered by the Bureau of Land Management (BLM). An additional 840 acres of BLM land adjacent to but outside the WSA and 355 acres of split-estate with Federal surface were included in the study and are recommended for wilderness designation in this report. Forty sections (23,520 acres) of State land, two parcels (118 acres) of private land, and two parcels of split-estate (355 acres of Federal surface and State minerals) land are inheld in the WSA. Thirty six sections of State land (20,961 acres) and all of the private and split-estate lands are within the portion of the WSA recommended for wilderness designation (see Table 1).

The WSA is in the Uinta Basin Section of the Colorado Plateau Physiographic Province. The Green River has cut a very deep, somewhat sinuous canyon through the plateaus bounded by the Roan and Book Cliffs.

In places the canyon walls are vertical and the canyon is quite narrow. The numerous tributary canyons are generally steep, in some cases falling several thousand feet in a few miles, and vary in width from narrow clefts to relatively wide gorges. The total length of perennial streams in the WSA is 207 miles, 206 miles of which would be within the portion recommended for wilderness designation. Elevations range from a little above 4,000 feet along the Green River to 9,600 feet on the Tavaputs Plateau west of the river. Juniper-pinyon woodland is the predominant vegetation, mixed with or giving way to Douglas fir in some places at higher elevations. About one-fourth of the WSA is barren rock outcrop.

Climate varies with aspect and elevation, from arid to semiarid with warm to hot summers and generally cold winters.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November, 1990. Four alternatives were analyzed in the EIS: a partial wilderness alternative where 224,850 acres would be designated as wilderness and 65,995 acres would be released for uses other than wilderness, which is the recommendation in this report; a no action (no wilderness) alternative; an all wilderness alternative; and a smaller partial wilderness alternative of 144,510 acres.

2. RECOMMENDATION AND RATIONALE:
224,850 acres
(recommended for wilderness)
65,995 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 224,850 acres, including 840 acres outside but adjacent to the WSA, as wilderness and to release the remaining 65,995 acres for uses other than wilderness.

Addition of the 840-acre area outside the WSA would provide for integrated management of the entire Rock Creek drainage and would avoid isolating the upper part of the drainage between private land and the recommended wilderness.

Since publication of the Final EIS BLM has added two small tracts, one on Steer Ridge and one on Summerhouse Ridge, totaling 280 acres to the recommended wilderness. The tracts are along the west-

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	289,650
Split-Estate (BLM surface only)[b]	355
In-holdings (State, Private)	23,638
Total	313,643
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	223,655
BLM (outside the WSA)	840
Split-Estate (within the WSA)	355
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	224,850
In-holdings (State, private)	21,079
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	65,995
Split-Estate	0
Total BLM land not recommended for wilderness	65,995
In-holdings (State, Private)	2,559

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings and/or split-estate tracts included within the portion of the WSA recommended for designation.

[b] In this report, split-estate lands are defined as only those lands with Federal surface and non-Federal subsurface (minerals). Lands that have Federal minerals but non-Federal surface are classified according to the owner of the surface.

ern boundary of the WSA and are isolated between private land and the previously proposed wilderness.

The change in acreage is within the margin of error for acreage calculations, therefore, the recommended acreage has not changed. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional inholding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition of inholdings and split-estate minerals.

All of the area that is recommended for wilderness designation is in a natural state and has outstanding opportunities for solitude and primitive recreation. Scenic values, landscape and ecological

diversity, wildlife, archaeological sites, and historical interests are exceptional. The vast expanse of canyon, benches, and ridges is some of the most rugged and remote land in Utah. Diverse wildlife includes elk, bighorn sheep, black bears, mountain lions, three endangered fish species, bald eagles, and peregrine falcons. All 190 miles of wild and scenic river inventory segments in the WSA would be in the portion recommended for wilderness.

An 18-mile way along the Price River and on Beckwith Plateau would be cherry-stemmed, that is, excluded from the WSA. The plateau is currently not accessible by 4-wheel drive vehicles due to erosion of the way.

Water flows in the Green River are influenced by complex circumstances. The possibility exists for conflicts with developments that would consumptively use water upstream from the WSA on the Price River. Because the nature and magnitude of the conflicts are uncertain and the WSA has demonstrated wilderness values, as discussed above, wilderness values are given precedence. Special wording regarding upstream use of water would be appropriate in wilderness legislation for the Desolation Canyon WSA. Construction of a dam for hydroelectric uses on this part of the Green River is unlikely because of existing requirements, such as protection of endangered fish.

Oil and gas may be found in the recommended portion of the WSA, but the most likely locations for oil and gas exploration and development are outside the recommended area. In the recommended portion, wilderness values outweigh the importance of the energy and mineral resource potential.

Wilderness would be compatible with existing management of the adjacent Uintah and Ouray Indian Reservation Hill Creek Extension, to preserve roadless and natural values.

Approximately 95 percent of the area that is not recommended for wilderness designation is in a natural condition and has opportunities for primitive recreation. About 95 percent of the area has outstanding opportunities for solitude.

The areas not recommended for wilderness designation are along the western edge and the southeastern border of the WSA where there is high potential for oil and gas and/or coal resources.

The Peter's Point oil and gas Unit, 5,350 acres of which are in the nonrecommended portion of the WSA (Area A), has proven gas resources. There are three producing gas wells inside the WSA in this area.

Approximately 8,000 acres of the nonrecommended portion of the WSA in the vicinity of Little Park Wash (Area C) are estimated to be underlain by approximately 140 million tons of recoverable coal. The presence of coal in this area has been demonstrated. It is also projected that further development of oil and gas resources is more likely in areas B, C, and D than in the central, less accessible part of the study area. Areas B and C surround the former Range Creek Known Geologic Structure (KGS) which has a well with production capability. About 510 acres of Area C are in leases held by production. There also is a well with production capability on a State section adjacent to Area D.

Overall, mineral potential is considered to outweigh wilderness values in several locations along the western margin and in the southeastern corner of the WSA, especially in comparison with the portion of the WSA that is recommended for wilderness designation.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Overall, imprints significantly affect about 1 percent (2,935 acres) of the WSA.

The remaining 287,910 acres of the WSA meets the naturalness criterion for areas under wilderness review. The rugged terrain and seasonal flash-flooding tend to reinforce and maintain the naturalness of the area.

In the 18-mile way along the Price River and onto the Beckwith Plateau is an unnatural intrusion, but has been excluded from the WSA by cherry-stemming. The way was mechanically constructed in 1974 and 1975 but is not maintained on a regular basis.

In the head of Naylon and Bobby Canyons, segments of a way constructed in the 1950s to access mining prospects remain. All segments are inaccessible and for the most part are only visible for short distances. Four prospects are located along the way also are not substantially noticeable.

Other imprints in the WSA include two livestock reservoirs, five spring developments, historic structures, gap fences, and a trough, none of which are considered substantially noticeable.

A 5-mile long way in Little Park is used for access to maintain livestock ponds. A 1-mile section of mechanically constructed trail between Range Creek and the Last Chance Benches is impassible. About 4 miles of two partially revegetated seismograph ways extend to the points between the Green and Price Rivers. Portions of an abandoned road that extends about 6 miles along the west side of the Green River between Gunnison Butte and the Price River are still visible, although much of the road has either revegetated or been covered by landslides.

Since the intensive inventory in 1980, about 4.2 miles of road and five drill pads totaling 6.2 acres were built for the purpose of drilling five gas well sites in the WSA. This disturbance occurred on leases issued between 1951 and 1971. Production was attained at three of the sites, and the roads are likely to remain for 20 to 30 years. About 1.5 miles of road also extends to a drill site along Cedar Ridge south of Jack Creek (now cherry-stemmed from the WSA). About 3 miles of abandoned road extends out of a southern fork of Cedar Ridge to an abandoned drill site. This also is cherry-stemmed from the WSA. Some revegetation has occurred and apparently the road is no longer used.

Other surface-disturbing activities that have occurred since the BLM Wilderness Inventory, include seismic lines, trail maintenance, and stream exclosures and stabilization structures on Rock Creek. These activities have not significantly affected the naturalness of the WSA as a whole and will become less noticeable in time due to natural weathering processes.

B. Solitude

In all, about 90 percent (261,760 acres) of the WSA meets the criterion for solitude due to very rugged terrain or to terrain and vegetation. Another 9 percent of the WSA (26,150 acres) in the areas where topographic screening is not dominant, also meet the criterion due solely to vegetative cover. In the remaining 1 percent (2,935 acres) in the drainages of Jack Creek, on Cedar Ridge, and on the east side of the Green River along existing roads, opportunities for solitude are less than outstanding.

The size, configuration, terrain, and vegetation of the WSA enhance opportunities for solitude. Canyons ranging from 1,000- to 5,000-feet deep are separated by narrow ridges in the north and benches or plateaus in the south. There are about 400 to 450 miles of canyon bottom within the WSA. Lines of sight along the bottoms rarely exceed a 0.5 mile and are usually considerably less. Canyons in the northern half of the WSA generally become more V-shaped from east to west. Canyons along the river and in the south of the WSA nearly all alternate near vertical walls with steep talus slopes. The terrain in 90 percent (261,760 acres) of the WSA creates outstanding opportunities for solitude.
The Uintah and Ouray Indian Reservation along the Green River also influences opportunities for solitude. The land is rugged and scenic and has features similar to those on the opposite side of the river. It is undeveloped except for a dirt road between Chandler Canyon and Florence Creek that has been impassable to most vehicles since 1983.

The most significant off-site influences include the town of Green River near the WSA on the south and vehicular use of 7 miles of cherry-stemmed county road east of the Green River. The road is regularly used. Recreational use in the area is a combination of day use, float boating, and park use by residents of Green River. Elsewhere, the WSA is separated from the town by 1,000-foot cliffs. The roads in Jack Creek and on Cedar Ridge affect opportunities for solitude as they are regularly used to check the existing well locations. Interstate Highway 70 (I-70) and Utah Highway 50 and 6 are visible from points along the Book Cliffs at distances of 2 to 5 miles. Parts of the WSA adjacent to the roads are as much as 1,000 feet higher, however, and the influence of traffic on solitude is not significant.

The Book Cliffs, ridge tops, and high benches south of the Roan Cliffs provide extensive overlooks of the terrain within the WSA. Looking from the WSA outward are vistas of mountain ranges 50 to 100 miles away to the north, south, and west.

C. Primitive and Unconfined Recreation

The entire WSA is well suited for a diversity of outstanding primitive recreation. Present use is primarily whitewater river running and camping, hiking, fishing, swimming, and sightseeing activities associated with it. Based on these opportunities, the entire WSA meets the outstanding primitive recreation criterion for areas under wilderness review. Outstanding opportunities and uses likely to expand in the near future are horseback activities and more extensive hiking, including backpacking or dayhikes from lodges or access points around the WSA. Hunting uses would be expected to continue, and more mountaineering or winter sports use may occur.

D. Special Features

The WSA has a substantial number of important features. Elevation varies by more than 5,500 feet and types of vegetation and wildlife habitat vary. In the north portion of the WSA, water is relatively abundant, especially for an area in the arid southwest. The extreme ruggedness of the terrain contributes to the WSA's scenic quality, remoteness, and habitat for species such as raptors and bighorn sheep which are sensitive to development. The WSA contains both canyon desert and high mountain environments.

Among the special features in Desolation Canyon is the topographical diversity. The WSA has an extensive system of deep canyons. The canyon at Rock Creek is more than 1 mile deep. The WSA contains arches, pinnacles, and other erosional remnants not known to occur elsewhere in the Wasatch Formation in similar concentrations or settings. Vegetation is diverse, ranging from desert to high mountain types in a distance of only 5 or 10 miles. The Uintah Basin hookless cactus (Sclerocactus glaucus) is a threatened plant species that may occur in or near the WSA. There are five other plant species that are considered special status species that occur, or may occur, within the WSA. The diversity of wildlife in the WSA is unusual compared with public lands surrounding the WSA. There are six animal species (peregrine falcon, black-footed ferret, bald eagle, Colorado squawfish, humpback chub, and bony-tail chub) listed as endangered that occur, or may occur, in the WSA.

There are ten other special status animal species and five plant species that are considered sensitive that also occur, or may occur, within the WSA. One of these species, the razorback sucker, has been designated as threatened in Utah by the Utah Division of Wildlife Resources (UDWR). The WSA has populations of cougar, elk, Rocky Mountain bighorn sheep, and black bear, which are wildlife species associated with wilderness.

Refer to the Vegetation and Wildlife Including Special Status Species sections and Appendix 4 of the Utah BLM Statewide Wilderness Final EIS for additional information.

Approximately 90 percent (261,860 acres) of the WSA is rated as outstanding for scenic quality. The WSA includes both Flat Canyon Archaeological District and a portion of Desolation Canyon National Historical Landmark. The WSA has several known archaeological sites in addition to those in the archaeological district.

Seven of the known sites are potential National Register sites. The Range Creek wild horse herd of approximately 25 horses is on Cedar Ridge in the WSA. Water is abundant in the northern half of the WSA. The WSA has about 200 miles of perennial rivers and streams. Approximately 191 miles of three rivers (Green River, Price River, and Range Creek) that flow through the WSA are wild and scenic river inventory segments.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Douglas fir forest (59,090 acres), juniper-pinyon woodland (144,825 acres), and saltbush-greasewood (86,930 acres).

The Douglas fir forest PNV is not represented at all in the NWPS and is represented in only two other BLM wilderness study areas, both of which are in Utah.

The other two PNV types in the WSA are represented in the NWPS in other BLM study areas, although the saltbush-greasewood PNV would occur only in Utah.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (Five Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah, standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Desolation Canyon WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	10,180
Juniper-Pinyon Woodland	11	1,401,745	84	1,999,180
Saltbush-Greasewood	1	20,000	17	307,073
UTAH (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	10,180
Juniper-Pinyon Woodland	1	26,000	53	1,561,373
Saltbush-Greasewood	1	20,000	17	307,073

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,079,807	78	1,968,830
Provo-Orem, Utah	11	708,638	90	2,496,023

Source: BLM File Data.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A Desolation Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas. There are five designated wilderness areas within 100 miles of the WSA. To the northwest are the 8,922-acre Lone Peak Wilderness (U.S. Forest Service [FS]), the 10,750-acre Mt. Timpanogas Wilderness (FS), and the 28,000-acre Mt. Nebo Wilderness (FS); to the northwest is the 456,705-acre High Uintas Wilderness (FS); and to the south is the 45,000-acre Dark Canyon Wilderness (FS).

Manageability (The area must be capable of being managed effectively to preserve its wilderness character.)

The portion of the WSA recommended for wilderness designation can reasonably be managed as wilderness to preserve values now present in the area. A potential threat to manageability in this area is the presence of 36 sections of State land (20,961 acres), two parcels of private land (118 acres), and two parcels of split-estate land (355 acres) with Federal surface and State minerals. Because of the known oil and gas potential of the WSA up to 35 miles of access road could be required in the recommended portion of the WSA for access to in-held lands for oil and gas exploration. The majority of the access to in-held lands would be restricted to the Rattlesnake Canyon area east of the Green River. Of the 20,961 acres of State land in the recommended portion of the WSA, 7,763 are leased for livestock grazing and 13,020 are leased for minerals. Grazing is the only activity occurring on State lands in the WSA at this time.

Approximately 1,560 acres of leases held by production would be in the area recommended for wilderness designation in the vicinity of Jack Creek. Development is likely in this area following designation, but this would not significantly affect the overall manageability of the recommended area.

There are only three mining claims presently in the area recommended for wilderness designation. Development is not expected in the foreseeable future on these claims because the likelihood of production is low.

Portions of the 65,995-acre area not recommended for wilderness designation would not be manageable as wilderness. There are 2,559 acres of State land in-held in this area and the probability of additional access roads to these lands in areas C and D (see Map) is high because the likelihood of additional oil and gas exploration and production is high. Area A has three producing wells and 5,350 acres of pre-FLPMA leases in the Peter's Point Unit where additional development is likely. There are a total of 4,346 acres of pre-FLPMA and 12,253 acres of post-FLPMA oil and gas leases in the area not recommended for wilderness designation where additional oil and gas development is likely to occur even if the area is designated as wilderness.

About 640 of the 2,559 acres of in-held State lands in the area not recommended for wilderness are leased for livestock grazing, and all of the in-held State lands are leased for minerals. Grazing

is the only present activity on these lands.

There are no mining claims or conflicts with locatable mineral development likely to occur in the area not recommended as wilderness.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) have prepared a mineral assessment report for the Desolation Canyon WSA (USGS Bulletin 1753-B, William B. Cashion, et. al., 1990). Coal resources include 22 million tons in beds of 3.5 feet or more thick and under 2,000 feet or less of overburden. Subeconomic oil shale deposits exist in the northernmost part of the WSA containing approximately 60 million barrels of oil in place. The northern part of the area is also known to contain a thick sequence of bituminous sandstone of undetermined grade and extent. The WSA is also known to have minor occurrences of uranium. The study area also has high potential for undiscovered oil and gas in the northern part, and a moderate potential for oil and gas in the central and southern part. The WSA has high potential for additional coal resources, low potential for uranium, and moderate potential for tar sand.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness alternative, present economic conditions and trends would not be significantly affected. In the long term, coal mining would provide about 300 jobs. This is equivalent to 2.3 percent of the projected Carbon County employment in the year 2010. Employment in oil and gas exploration and development would continue in the nondesignated area and on leases held by production in the designated area, but would be for a shorter period of time than with the no action/ no wilderness alternative because potential for oil and gas production would be foregone on 74 percent of the leasable portion of the WSA. Recreation-related local sales could contribute up to $1,264,265 annually to the local economy by the year 2020. The WSA would contribute $135,880 annually in local livestock sales and $10,463 in grazing fees. Oil and gas leasing fees of up to $356,660 annually would be foregone because the designated area would be closed to leasing. Additionally, potential Federal and State revenues from royalty payments would be reduced by as much as $1 million per year, depending on demand and production levels. Federal revenues from commercial recreation outfitting would probably increase as the area becomes better known after designation.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 156 inputs specifically addressing this WSA were received from 771 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 369 commenters supported wilderness designation for part or all of the WSA, while 396 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the need to protect wilderness values in the WSA from development, preserve the area for future generations, and add the diversity within the WSA to the NWPS. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would preclude mineral

exploration and development, restrict public access and livestock management, harm local and State economies, cause Federal air quality standards for the region to become more restrictive, and they stated that wilderness is not compatible with multiple use. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the U.S. Bureau of Reclamation (USBOR), and the USBM, commented on the Draft EIS for this WSA. The USBOR commented regarding the past study of a reclamation project, the Gray Canyon Dam, in the WSA. The Bureau did not take a position regarding wilderness designation but noted that planning for this project would remain inactive in the foreseeable future. The USBM also did not take a position on wilderness designation but commented that the findings of the USGS and USBM mineral surveys should be included in the Final EIS. These findings are considered in the Final EIS and this study report.

No comment letters were received on the Final EIS.

There are 40 sections of State land in the WSA. In commenting on the Draft EIS the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State noted that the WSA has the highest wilderness values in its region but also has a very high degree of mineral conflict, potential conflicts with a deep water aquifer, and hydropower generation.

The Carbon, Emery, and Grand County land use plans do not specifically address wilderness designation. The County Commissions are opposed to wilderness designation of the Desolation Canyon WSA and have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. The Commissions stated that there is no need for designation as a wilderness to preserve the qualities found in this WSA. Protection is available in the form of National Landmark designation. The Commissions also believe that development is already taking place that would be disruptive to the wilderness environment contemplated in the Wilderness Act, and that State and private in-holdings would create severe management problems. The Commissions fear that wilderness designation would bring changes in air quality requirements and would establish Federal reserved water rights that would negatively impact present and future economic conditions in the counties.

DESOLATION CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation Large Partial Wilderness (224,850 Acres)	No Action/No Wilderness	All Wilderness (290,845 Acres)	Small Partial Wilderness (144,510 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is 77 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost and Class A scenery would be directly reduced in quality on 223 acres of the WSA. The disturbance would be due to mineral exploration and development, rangeland projects, and construction of access to State in-holdings. Opportunities for solitude and primitive recreation, visual qualities, and habitat for wildlife associated with wilderness would be indirectly reduced in quality on up to 87,253 acres of the WSA. Most of the impact would be in the nondesignated area. All wild and scenic river values would receive additional protection.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 423 acres of the WSA. The disturbance would be due to mineral exploration and development, rangeland projects, and access to State in-holdings. Class A scenery would be directly reduced in quality in disturbed areas. Opportunities for solitude and primitive recreation, wildlife habitat, and scenic quality would be indirectly reduced in quality on up to 116,338 acres of the WSA. Wild and scenic river values would not receive additional protection but no loss is anticipated in the foreseeable future.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation and scenic quality would be directly lost on 143 acres of the WSA. The disturbance would be due to mineral exploration and development, rangeland projects, and access to State in-holdings. Opportunities for solitude and primitive recreation, habitat for wilderness-dependent wildlife species, and scenic quality would be indirectly reduced in quality on up to 58,170 acres of the WSA. All wild and scenic river values would receive additional protection.	Wilderness values would be preserved overall in the designated area which is 50 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost and the quality of Class A scenery would be directly reduced on 373 acres of the WSA. The disturbance would be due to mineral exploration and development, rangeland projects, and access to State in-holdings. Opportunities for solitude and primitive recreation, visual qualities, and habitat for wildlife associated with wilderness would be indirectly reduced in quality on up to 101,795 acres of the WSA. Most of the impact would be in the nondesignated area. All wild and scenic river values would receive additional protection.
Impacts on Geology and Topography	Topography would be altered by surface disturbance on 0.09 percent (273 acres) of the WSA. Underground mining of coal would cause subsidence and surface fractures on 2.7 percent (8,000 acres) of the WSA.	Topography would be altered by surface disturbance on about 0.1 percent (423 acres) of the WSA. Underground mining of coal would cause subsidence and surface fractures on up to 2.7 percent (8,000 acres) of the WSA.	Topography would be altered on 0.05 percent (143 acres) of the WSA.	Topography would be altered by surface disturbance on about 0.13 percent (373 acres) of the WSA. Underground mining of coal would cause subsidence and surface fractures on up to 2.7 percent (8,000 acres) of the WSA.

DESOLATION CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Large Partial Wilderness (224,850 Acres)	No Action/No Wilderness	All Wilderness (290,845 Acres)	Small Partial Wilderness (144,510 Acres)
Impacts on Soils	There would be localized increases to erosion on 273 acres (0.09 percent of the WSA). Overall soil loss from the WSA would increase by 0.7 percent (1,335 cubic yards per year).	There would be localized increases of erosion on 423 acres. Overall, annual soil loss from the WSA would increase by 1 percent (2,068 cubic yards).	There would be localized increases in erosion. Overall, soil loss from the WSA would increase by about 0.4 percent (699 cubic yards per year).	There would be localized increases in soil erosion on 373 acres. Overall, loss from the WSA would increase less than 1 percent (2,068 cubic yards).
Impacts on Vegetation	Approximately 273 acres (0.09 percent) of the vegetation in the WSA would be modified. Populations of threatened endangered and special status plant species would be preserved.	Approximately 423 acres (0.1 percent) of the WSA would be modified with this alternative. Populations of special status species would be protected. Because necessary measures would be taken, it is concluded that individual plants could be inadvertently destroyed but the viability of populations of threatened, endangered, or special status plant species would be preserved with this alternative.	About 0.05 percent (143 acres) of the vegetation in the WSA would be disturbed. Populations of endangered, threatened, and special status plant species would be preserved.	Approximately 373 acres (0.13 percent) of the vegetation in the WSA would be modified with this alternative. Populations of threatened, endangered, or special status plant species would be preserved.
Impacts on Water Resources	Sediment and salinity in Jack Creek, Rattlesnake Canyon, Range Creek, and the Price River would increase slightly as a result of surface disturbance. Such increase would not be measurable in the Green and Colorado rivers. Impacts on water use upstream of the WSA would be the same as with the All Wilderness Alternative because the Price River would flow through the designated area.	Sediment and salinity in Jack Creek, Range Creek, the Price River, and Rattlesnake, Tusher, and Long canyons would increase slightly as a result of surface disturbance. Such increases would not create measurable changes in water quality in the Green River or the Colorado River system.	There would be slight increases in sedimentation in Jack Creek, Rattlesnake, and Long Canyons. Water quality in the Colorado and Green Rivers would not be measurably altered. Future water diversions and new consumptive uses of water on the Price River upstream of the WSA in Carbon County may be hampered or restricted in order to preserve resources such as recreational uses in the WSA.	Sediment and salinity in Jack Creek, Range Creek, The Price River, and Rattlesnake, Tusher, and Long Canyons would increase slightly as a result of surface disturbance. Such increases would not create measurable changes in water quality in the Green River or the Colorado River system. Impacts on water use upstream of the WSA would be the same as with the All Wilderness Alternative because the Price River would flow through the designated area.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Large Partial Wilderness (224,850 Acres)	No Action/No Wilderness	All Wilderness (290,845 Acres)	Small Partial Wilderness (144,510 Acres)
	Alternatives			
Impacts on Mineral and Energy Exploration and Production	Potential for extraction of oil and gas would be foregone on 74 percent of the leasable portion of the WSA. Coal exploration and production would not be affected. Loss of recovery potential of other mineral would not be significant because development is unlikely even without partial wilderness designation.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims, and mineral developments could occur without restriction for the protection of wilderness values.	Wilderness designation would not affect production gas wells or future development of leases held by production. Potential for extraction of an unknown but locally significant amount of oil and gas would be foregone. In the long term, 50 to 70 million tons of recoverable coal could not be mined	This alternative would not significantly reduce mineral and energy exploration or production from the WSA.
Impacts on Wildlife Habitat and Populations	Wildlife habitat and populations would be reduced slightly by direct disturbance on 0.09 percent (273 acres) of the WSA. Continued human presence and activities over the life of oil and gas wells and coal mines would reduce avail-able habitat and intrude on populations of sensitive black bear, mountain lion, and bighorn sheep over about 30 percent (87,253 acres) of the WSA. Populations of endangered, threatened, and special status animal and fish species would be preserved.	Wildlife habitat and populations would be reduced slightly by direct disturbance of 0.1 percent (423 acres) of the WSA. Continued human presence and activities over the life of oil and gas wells and coal mines would reduce available habitat and intrude on populations of sensitive black bear, mountain lion, and bighorn sheep over about 40 percent (116,338 acres) of the WSA. Populations of endangered, threatened, and other special status animal and fish species would be preserved.	Wildlife habitat and populations would be protected by wilderness designation. Populations of wilderness-dependent species such as cougar, bear, and bighorn sheep would be adversely affected by activities on about 20 percent (58,170 acres) of the WSA. Populations of endangered, threatened, and special status animal and fish species would be preserved.	Wildlife habitats and populations would be reduced by direct disturbance of 373 acres (0.13 percent) of the WSA. Continued activities over the life of development projects would disturb available habitat and possible populations of sensitive black bear, cougar, and bighorn sheep on 35 percent (101,795 acres) of the WSA. Populations of endangered, threatened, and special status animal and fish species would be preserved.
Impacts on Visual Resources	Visual resources would be protected in the designated area. Visual resources would be degraded on approximately 30 percent (78,253 acres) of the WSA and VRM objectives would not be met on 273 acres.	Visual resources would be degraded on approximately 40 percent (116,338 acres) of the WSA. VRM objectives would not be met on 0.1 percent (423 acres) of the WSA.	Visual resources would be protected. Visual resources would be degraded on 20 percent of the WSA and VRM objectives would not be met on 143 acres.	Visual resources would be protected in the designated area. Visual resources would be degraded on approximately 35 percent (101,795 acres) of the WSA and VRM objectives would not be met on 373 acres.

DESOLATION CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives			
	Recommendation Large Partial Wilderness (224,850 Acres)	No Action/No Wilderness	All Wilderness (290,845 Acres)	Small Partial Wilderness (144,510 Acres)
Impacts on Cultural Resources	Seventy of the 76 recorded sites including the Flat Canyon Archaeological District, all National Register eligible sites, and the Desolation Canyon National Historical Landmark, would be protected by wilderness designation. The remaining six recorded sites and all unrecorded sites in the nondesignated portion would continue to be protected by existing laws.	All sites would continue to receive protection under existing laws. Inadvertent loss or damage to archaeological sites may occur due to surface development. Impacts would probably be slight because only 0.1 percent (423 acres) of the WSA would be disturbed. Intentional vandalism and artifact collection may increase due to human presence and continued vehicular access. Cultural resource management would continue without regard to wilderness management considerations.	Cultural resources would receive additional protection and few impacts are expected because only 0.05 percent of the WSA would be disturbed. Cultural resource management may be limited in scope and execution in order to protect other wilderness values.	Sixty-one of the 76 recorded sites including the Flat Canyon Archaeological District, all National Register eligible sites, and the Desolation Canyon National Historical Landmark, would be protected by wilderness designation. The remaining 15 recorded sites and all unrecorded sites in the nondesignated portion would continue to be protected by existing laws.
Impacts on Recreation Use	Primitive recreation opportunities would be protected in the designated area. The quality of primitive recreation opportunities would be directly degraded on 273 acres and indirectly degraded on 30 percent (87,253 acres) of the WSA. Overall, recreational use would increase at the same rate as the other alternatives.	The quality of the primitive recreational experience would be directly degraded on 423 acres and indirectly degraded on about 40 percent (116,338 acres) of the WSA. Vehicular access to 5.5 miles of way would not be affected. Overall, recreational use would increase and water-based recreation on the Green River would not be affected because major disturbance would not occur along the river.	The quality of land and water based primitive recreational use would be protected and use would expand at the same rate as the No Action/No Wilderness Alternative. Overall, recreation use would be directly degraded on 143 acres and indirectly degraded on 20 percent (58,170 acres) of the WSA. The loss of vehicular opportunities in the WSA would not be significant on a regional basis because of the availability of nearby ORV areas.	Primitive recreation opportunities would be protected in the designated area. The quality of the primitive recreational experience would be directly degraded on 373 acres and indirectly degraded on about 35 percent (101,735 acres) of the WSA. Overall, recreational use would increase at the same rate as the other alternatives.

DESOLATION CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives			
	Recommendation Large Partial Wilderness (224,850 Acres)	No Action/No Wilderness	All Wilderness (290,845 Acres)	Small Partial Wilderness (144,510 Acres)
Impacts on Economic Conditions	in the long term, coal mining would provide 300 jobs. This is equivalent to 2.3 percent of the projected Carbon County employment in the year 2010. Employment in oil and gas exploration and development would continue in the nondesignated area and on 1,560 acres of leases held by production in the designated area, but would be for a shorter period of time than with the No Action/ No Wilderness Alternative because potential for oil and gas production would be foregone on 74 percent of the leasable portion of the WSA. Recreation-related local sales could contribute up to $1,264,265 annually to the local economy by the year 2020. The WSA would contribute $135,880 annually in local livestock sales and $10,463 in grazing fees. Oil and gas leasing fees of up to $356,660 annually would be foregone because 178,330 acres presently open to lease and not held by production could not be leased. Additionally, potential Federal and State revenues from royalty payments would be reduced by as much as $1 million per year, depending on demand and production levels. Federal revenues from commercial recreation outfitting (currently $55,155 annually) would probably increase as the area becomes better known after designation.	Implementation of the No Action/No Wilderness Alternative would not alter existing local economic conditions. Future increases in recreation use, and oil, gas, and coal exploration and development would contribute significantly to the local economy of Carbon, Emery, and Grand Counties. Coal, oil, and gas development could increase employment in Carbon County by up to 500 jobs at one time. This would be a 3.8 percent increase in the projected employment in the county in the year 2010. Recreation-related local sales could contribute up to $1,264,265 to the local economy by the year 2020. The WSA would contribute $135,880 annually in local livestock sales and $10,463 in grazing fees. Oil and gas leasing fees and royalty payments could contribute from $484,110 to over $1 million per year depending on production levels. Federal revenues from commercial recreation outfitting (currently $55,155 annually) would continue.	The potential for 300 jobs related to coal mining would be foregone. This is equivalent to 2.3 percent of the projected Carbon County employment in the year 2010. Employment in oil and gas exploration and development would continue on 5,860 acres of leases held by production, but would be for a shorter period of time than with the No Action/ No Wilderness Alternative because potential for oil and gas production would be foregone on 97.6 percent of the leasable portion of the WSA. Recreation-related local sales could contribute up to $1,264,265 annually to the local economy by the year 2020. The WSA would contribute $135,880 annually in local livestock sales and $10,463 in grazing fees. Oil and gas leasing fees of up to $472,390 annually would be foregone because 236,195 acres presently open to lease and not held by production could not be leased. Additionally, potential Federal and State revenues from royalty payments would be reduced by as much as $1 million per year, depending on demand and production levels. Federal revenues from commercial recreation outfitting (currently $55,155 annually) would probably increase as the area becomes better known after designation.	in the long term, coal mining would provide 300 jobs. This is equivalent to 2.3 percent of the projected Carbon County employment in the year 2010. Employment in oil and gas exploration and development would continue in the nondesignated area and on 1,560 acres of leases held by production in the designated area, but would be for a shorter period of time than with the No Action/ No Wilderness Alternative because potential for oil and gas production would be foregone on 41 percent of the leasable portion of the WSA. Recreation-related local sales could contribute up to $1,264,265 to the local economy by the year 2020. The WSA would contribute $135,880 annually in local livestock sales and $10,463 in grazing fees. Oil and gas leasing fees of up to $197,220 annually would be foregone because 98,610 acres presently open to lease and not held by production could not be leased. Additionally, potential Federal and State revenues from royalty payments would be reduced by as much as $1 million per year, depending on demand and production levels. The probability of this impact would be less than with the All Wilderness and Large Partial Wilderness Alternatives. Federal revenues from commercial recreation outfitting (currently $55,155 annually) would probably increase as the area becomes better known after designation.

a The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

DESOLATION CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 13 S., R. 17 E., Sec. 16 N1/2	320.00		Federal	State	No	Exchange		$1,000
T. 14 S., R. 16 E., Sec. 2, S1/2 NW S1/2, Lots 3,4	473.27		State	State	No	Exchange		$1,400
T. 14 S., R. 16 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 14 S., R. 16 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 15 S., R. 15 E., Sec. 2	659.00		State	State	No	Exchange		$2,000
T. 15 S., R. 16 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 15 S., R. 16 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 16 S., R. 16 E., Sec. 2	638.38		State	State	No	Exchange		$2,000
T. 16 S., R. 16 E., Sec. 2	619.44		State	State	No	Exchange		$2,000
T. 16 S., R. 16 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 16 S., R. 16 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 16 S., R. 17 E., Sec. 16 W1/2	320.00		State	State	No	Exchange		$1,000
T. 16 S., R. 17 E., Sec. 32	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Appendix (Continued)
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 18 S., R. 15 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 15 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 16 E., Sec. 31 SW NE, Lot 3	77.68		Private	State	No	Purchase	$4,800 to $6,400	$1,000
T. 18 S., R. 16 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 16 E., Sec. 36 W1/2, W1/2	160.00		State	State	No	Exchange		$ 500
T. 18 S., R. 17 E., Sec. 32 NE, S1/2 S1/2, NE, SE	400.00		State	State	No	Exchange		$1,250
T. 18 S., R. 17 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 18 E., Sec. 16, Lots 1-4	55.87		State	State	No	Exchange		$ 500
T. 18 S., R. 18 E., Sec. 32	538.28		State	State	No	Exchange		$1,700
T. 18 S., R. 18 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 19 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 19 E., Sec. 34 SE SW	40.00		Private	Private	No	Purchase	$2,400 tp $3,200	$1,000
T. 19 S., R. 15 E., Sec. 2	776.84		State	State	No	Exchange		$2,000
T. 19 S., R. 15 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

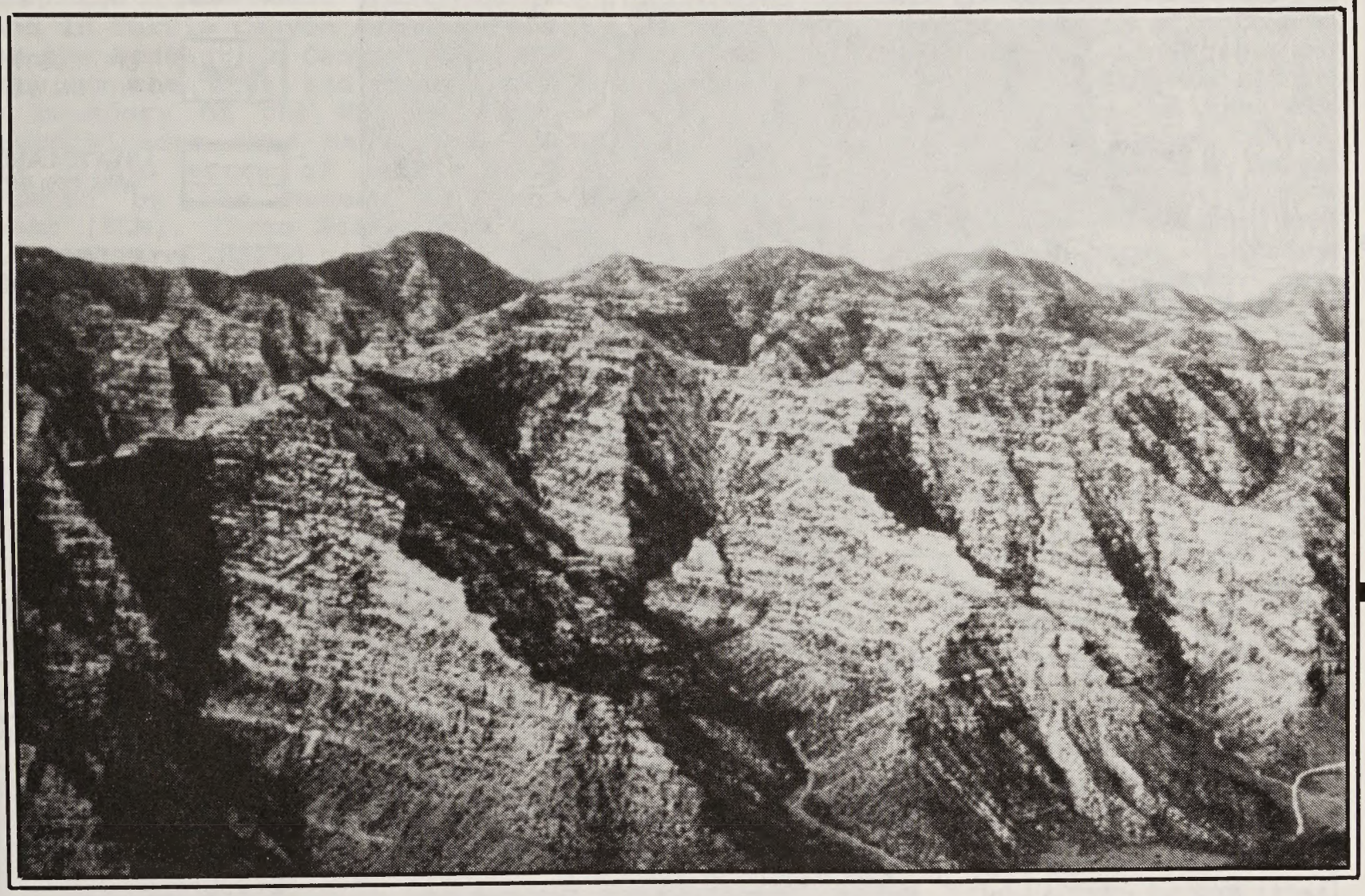
DESOLATION CANYON WILDERNESS STUDY AREA

Appendix (Continued)
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

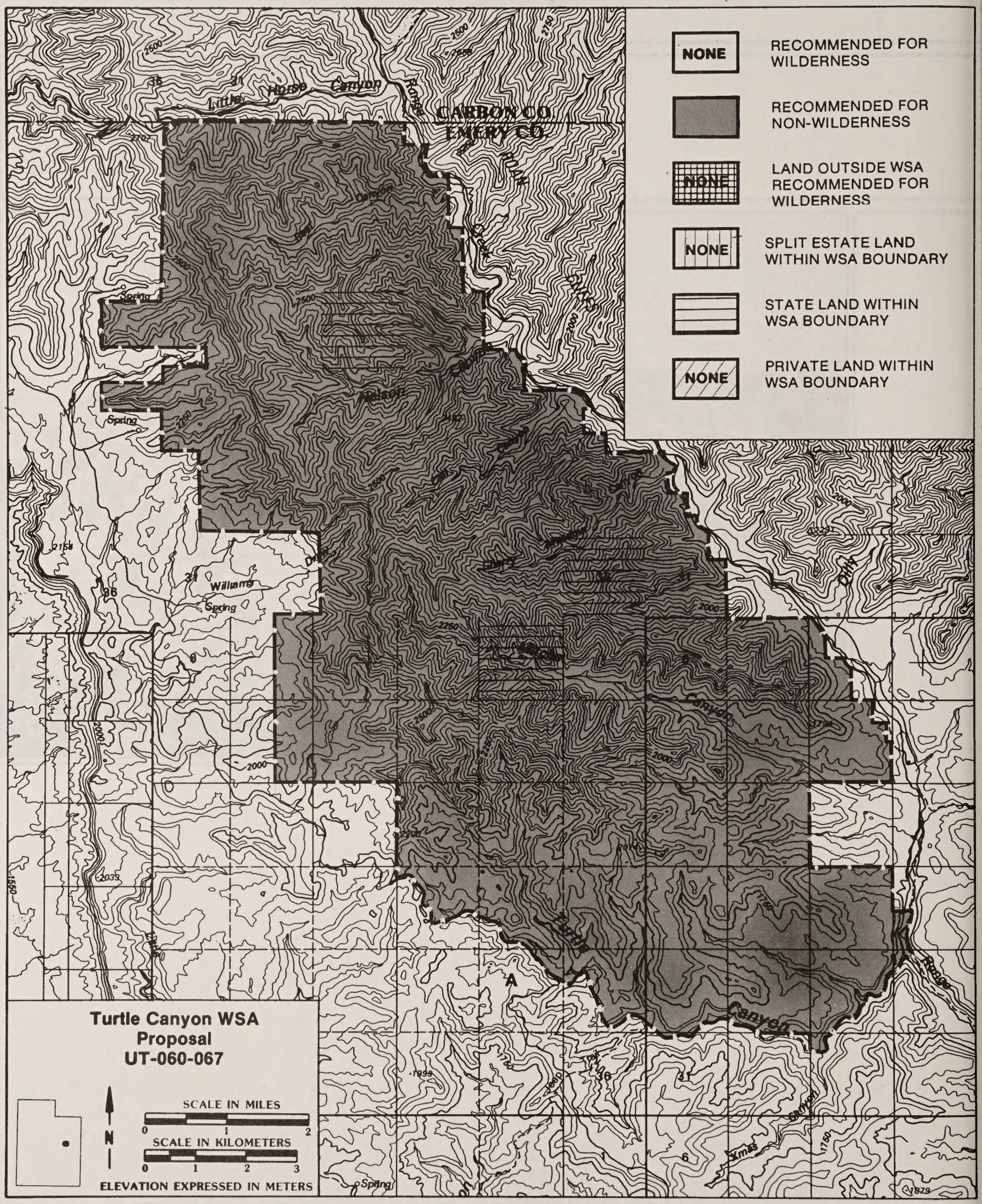
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 19 S., R. 15 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 16 E., Sec. 2	454.16		State	State	No	Exchange		$1,400
T. 19 S., R. 16 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 16 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 17 E., Sec. 2	785.36		State	State	No	Exchange		$2,000
T. 19 S., R. 17 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 18 E., Sec. 2	783.48		State	State	No	Exchange		$2,000
T. 19 S., R. 18 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 18 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 19 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 19 S., R. 19 E., Sec. 32 Lots 1-4	201.28		State	State	No	Exchange		$ 625
T. 20 S., R. 15 E., Sec. 2	655.32		State	State	No	Exchange		$2,000
T. 20 S., R. 16 E., Sec. 3, Lot 12	35.15		Federal	State	No	Exchange		$ 500

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Turtle Canyon WSA



TURTLE CANYON WSA



T. 16 S.

T. 17 S.

R. 15 E.

R. 16 E.

October 1991

TURTLE CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 33,690 acres

The Turtle Canyon Wilderness Study Area (WSA) (UT-060-067) is in Emery County, about 8 miles southeast of Sunnyside, Utah (population 911) and East Carbon City, Utah (population 1,942). The WSA is about 14 miles long from northwest to southeast and as much as 6 miles wide from east to west. Roads along Range Creek and in Turtle Canyon separate the WSA from the Desolation Canyon WSA (UT-060-068A) to the east and south. The western boundary of the WSA is along legal subdivisions (see Map). The WSA contains 33,690 acres of public land administered by the Bureau of Land Management (BLM). Three State sections (1,929 acres) are inheld within the WSA (see Table 1). The study area is on a divide between the Little Park Plateau above the Book Cliffs to the southwest and Range Creek Canyon to the northeast. Turtle Canyon forms the southern boundary of the WSA to its confluence with Range Creek. The divide ends on the south in a formidable line of east-west cliffs, cut by canyons 1,000 to 3,000 feet deep.

Flat areas in the southern portion of the WSA are limited to canyon floors, ledges, and narrow ridgetops. South of the cliffs, alternate layers of soft and resistant rocks form a landscape of benches and slopes cut by canyons 100 to 500 feet deep. Elevations in the WSA range from 4,800 feet in Turtle Canyon to 9,342 feet south of Little Horse Canyon. About one-third of the WSA supports pinyon-juniper woodland and nearly one-third of the area contains Douglas fir and mountain shrub. The remainder of the WSA is predominantly rock outcrop and pinyon-juniper and Douglas fir.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	33,690
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,929
Total	35,619
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	33,690
Split-Estate	0
Total BLM land not recommended for wilderness	33,690
In-holdings (State, Private)	1,929

Source: BLM File Data

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a no action (no wilderness) alternative, a partial wilderness alternative where 27,960 acres would be designated as wilderness and 5,730 acres would be released for uses other than wilderness, and an all wilderness alternative.

The proposed action in the Utah BLM Final Wilderness EIS was the partial wilderness designation. The recommendation in this report is the no action (no wilderness) alternative. A full analysis of the no action (no wilderness) alternative is provided in the Statewide Wilderness EIS.

2. RECOMMENDATION AND RATIONALE:
0 acres
(recommended for wilderness)
33,690 acres
(not recommended for wilderness)

The recommendation for this WSA is to release the entire 33,690 acres for uses other than wilderness. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

All of the WSA is in a natural condition and has outstanding opportunities for solitude and primitive recreation. The terrain is diverse and the variety of wildlife and vegetation and the scenic and archaeological values are exceptional. The WSA includes the rugged divide between Little Park and Range Creek and five major drainages with steep V-shaped canyons. The area is not recommended for wilderness designation.

Mineable coal reserves exist along the eastern margin of the area. There are 310 acres under lease. BLM projects that existing coal leases in the WSA will expire and not be renewed. However, new leases will be issued in the future, and about 27 million tons of mineable coal will be extracted from the WSA. Oil and gas exploration and production are also expected in the foreseeable future.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The entire WSA meets the naturalness criterion. Of this, 75 percent of the WSA (25,270 acres) consists primarily of relict plant communities not significantly influenced by human activities. Slopes exceeding 50 percent in this area remain in this condition. No substantially noticeable imprints or concentrations of imprints occur, but some minor imprints exist. Those within the WSA at the time of the wilderness inventory in 1980 include vehicle tracks that enter the WSA for about 0.5 mile along the bottoms of Cherry Meadow, Calf, and Nelson Canyons adjacent to Range Creek; two old abandoned jeep trails from previous seismic exploration in the extreme southeastern portion of the WSA, that are about 1 mile and 6.5 miles long. The longer trail does not have public vehicle access. Areas along these vehicle trails cover total about 30 acres and are not substantially noticeable in the area as a whole.

Since establishment of the WSA, a number of activities have occurred. Although some surface disturbance occurred, naturalness has not been impaired. Activities that have taken place are as follows:

1. Seismic exploration in a portion of the WSA in June 1981. All work was done with portable equipment and was completed with a helicopter. A reconnaissance of the area indicated that no surface disturbance occurred.

2. A programmatic environmental analysis encompassing several WSAs was completed and approved on August 19, 1983, to

allow for commercial horseback trips into the Turtle Canyon WSA, as well as other WSAs. No impairment to naturalness has occurred from commercial horseback trips.

3. A seismic exploration was completed in a portion of the WSA in September 1983. Natural revegetation of the action resulted in the area meeting nonimpairment standards by December 1988.

4. A total of 96 elk were released within portions of the Turtle Canyon and Desolation Canyon WSAs in January 1988. Naturalness has not been impaired by the transplant.

B. Solitude

The size and configuration of the WSA, in combination with topography, provide outstanding opportunities for solitude throughout the area. Most drainages are narrow, twisting, and steep throughout most of their lengths and are separated by broken, irregular ridgelines. The eastern portion of Mitchs Canyon is the most open canyon bottom area in the WSA. Even in this area, the canyon bends and turns and rises in a stair-step fashion, vertically separating one canyon segment from another. The terrain south and southwest of Mitchs Canyon is less rugged. Terrain varies from north to south, alternating between terraced benches and talus slopes to shallow, vertical-walled canyons.

Throughout the WSA, vegetation complements terrain, improving the opportunities for solitude. In more than 75 percent (25,267 acres) of the WSA, trees or large mountain shrub dominate. The remainder of the WSA is rock outcrop, grass, and sagebrush riparian types that include some large trees. Tree cover is moderate to heavy in the pinyon-juniper woodland, Douglas fir, and pinyon-juniper woodland/Douglas fir types. Often the canopy is closed. Cover in the mountain shrub type is dense and, in addition to large shrubs such as mountain mahogany, includes most of the tree species found elsewhere in the WSA.

No significant off-site influences affect opportunities for solitude.

The combination of size, configuration of the WSA, terrain, and vegetation is such that in much of the WSA open vistas, rather than secluded spots, must be sought. Vistas are found along the ridgetop, particularly along the principal ridge and in the southern portion of the WSA.

C. Primitive and Unconfined Recreation

Overall, the entire WSA is considered to have outstanding opportunities for primitive and unconfined recreation. Those outstanding primitive recreation values for which the WSA is best suited include hiking, climbing, hunting, camping, and sightseeing activities related to the WSA's scenic, cultural, geologic, and wildlife features.

Opportunities for fishing in Range Creek adjacent to the WSA are good to outstanding, although opportunities within the WSA are only fair. Horseback activities could occur in the WSA but potentially suitable routes or trails would be limited due to topography. Horseback trips for short distances in the canyon bottoms, along Range Creek, or in Mitchs and Turtle Canyons are possibilities.

D. Special Features

Approximately 75 percent of the WSA is rated as outstanding for scenic quality. The historical setting is similar to that of Desolation Canyon WSA. The archaeological potential for significant Fremont artifacts has been documented. The differences in terrain, vegetation productivity, variety in wildlife, and wildlife habitat represented in the WSA are highly unusual and are seldom found in an area of the size of the WSA. The WSA has small populations of cougar, elk, Rocky Mountain bighorn sheep, and black bear, which are wildlife species associated with wilderness. Peregrine falcons and bald eagles, listed as endangered species, may frequent the WSA. Six other animal species and three plant species that are considered special status may occur within the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Colorado Plateau Province/Ecoregion.

The PNV in the WSA is entirely juniper-pinyon woodland (33,690 acres). The juniper-pinyon woodland PNV type is well-represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Turtle Canyon WSA could contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA. A Turtle Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,110,315
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,672,508

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,225,985
Provo-Orem, Utah	11	721,793	90	2,753,178

Source: BLM File Data.

TURTLE CANYON WILDERNESS STUDY AREA

There are five designated wilderness areas within 100 miles of the WSA. To the northwest are the 8,922-acre Lone Peak Wilderness (U.S. Forest Service [FS]), the 10,750-acre Mt. Timpanogas Wilderness (FS), and the 28,000-acre Mt. Nebo Wilderness (FS); to the north-northwest is the 456,705-acre High Uintas Wilderness (FS), and to the south is the 45,000-acre Dark Canyon Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The WSA can be managed for wilderness to preserve values now present in the area. Livestock grazing would continue in the WSA but would not significantly detract from wilderness values. There is only one existing post-FLPMA oil and gas lease (1,920 acres) and no mining claims in the WSA. The post-FLPMA lease is subject to stipulations for protection of wilderness values. Development of 310 acres of existing coal leases in this area is not projected because the leases will likely expire before development and will not be renewed if the area is designated wilderness.

Provision of access to and activities on 1,929 acres of State land in-held in the portion of the WSA recommended as wilderness could affect wilderness values and uses in the study area. BLM would be obligated to provide access to State lands and could not administratively control development of those lands. BLM projects up to 10 acres of surface disturbance including up to 3 miles of roads associated with access to in-held State lands. This would not affect the overall manageability of the area.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Turtle Canyon WSA (USGS Bulletin 1753, William B. Cashion, et al., 1990). The report indicates that coal deposits underlie the Turtle Canyon WSA. Identified bituminous coal resources in beds 3.5 feet or more thick and under 2,000 feet or less of overburden are estimated to be 6.3 million short tons in the Turtle Canyon study area. Up to 89 million short tons of identified and potential coal resource with 3,000 feet or less of overburden are estimated in the WSA. Minor occurrences of uranium have been found in the basal part of the Wasatch Formation in the western part of the WSA. Mineral resource potential is estimated to be high for coal; moderate for oil and gas, low for tar sand and oil shale; low for uranium; low for bentonite, zeolites, geothermal energy, and all other minerals; and unknown for coal bed methane.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended no wilderness designation, present and future economic conditions would not be significantly affected. Employment for oil and gas exploration and development in the WSA would be allowed. Annual local sales related to recreation could contribute up to $18,040 annually by the year 2020. Livestock grazing would continue to contribute $3,380 in livestock sales and $260 in Federal revenues annually. Annual oil and gas and coal leasing fees would continue as would potential for coal royalty payments.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 54 inputs specifically addressing this WSA were received from 427 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional input or signature. Each individual was credited with one signa-

ture or testimony regardless of the number of inputs. In general, 34 commenters supported wilderness designation for part or all of the WSA, while 388 commenters were opposed. Five commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the naturalness, special features, and primitive recreation opportunities in the WSA. The majority of those commenting in favor of wilderness were from other states and from urban Utah. Of particular concern was the need to protect wilderness characteristics, wildlife, and wildlife habitat.

Those opposing wilderness were concerned that wilderness would prohibit mineral exploration and development, restrict public access and livestock grazing management and harm the State and local economies. Many felt that wilderness is not compatible with multiple use management and that designation would cause Federal air quality standards for the region to become more stringent. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the U.S. Bureau of Reclamation (USBOR) and the USBM commented on the Draft EIS for this WSA. The USBOR did not take a position on wilderness designation but commented on a past study of a reclamation project located in the WSA, stating that project planning would remain inactive in the foreseeable future. BLM records do not indicate that there is a reclamation withdrawal actually inside the Turtle Canyon WSA. The USBM also took no position on wilderness designation but requested that the BLM utilize the findings of the USGS and USBM mineral surveys in the Final EIS. Those findings are incorporated into the Final EIS and study report.

No comment letters were received on the Final EIS.

There are three state sections (1,929 acres) in the WSA. In commenting on the Draft EIS the State of Utah expressed general opposition to wilderness designation. The State commented that Turtle Canyon WSA has high wilderness values and moderate conflicts compared to other WSAs in the region. Concern was expressed that oil and gas potential and coal development conflicts were not sufficiently reduced in the partial alternative. Other comments expressed concern over a reclamation withdrawal in Gray Canyon.

The Turtle Canyon WSA is in Emery County, Utah. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that wilderness designation would be in conflict with the County Master Plan; that the State in-holdings will compromise the manageability of the area; and that wilderness designation would lead to more restrictive air quality and visibility standards that would have a substantial negative effect on the economic future of Emery County.

TURTLE CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (33,690 Acres)	Partial Wilderness (27,960 Acres)
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 330 acres because of oil, gas, and coal exploration and development and for construction of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 5,053 acres. Some Class A scenery would be reduced in quality in disturbed and surrounding areas, and some wilderness dependent wildlife would leave the areas of direct and indirect disturbance during the period of activity. Special status plant species would not be significantly affected because only 1 percent of the WSA would be disturbed and mitigation would be required. Vehicular use of 8 miles of ways and about 20 miles of new roads would occasionally detract from the quality of opportunities for solitude and primitive recreation in the WSA.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 10 acres because of construction of access roads to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality 674 acres. Although Class A scenery would be reduced in quality on the disturbed and surrounding areas.	Wilderness values would be preserved in the designated area which is approximately 83 percent of the WSA. Naturalness and opportunities for solitude and primitive recreation would be directly lost on 70 acres of the WSA because of oil and gas exploration and development and construction of access roads to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 1,684 acres. Most of the impact would be in the nondesignated area. Class A scenery would be reduced in quality in the disturbed and surrounding areas and wilderness-dependent wildlife would leave areas of direct and indirect disturbance during the period of activity. Special status plant species would not be significantly affected because only 0.2 percent (70 acres) of the WSA would be disturbed and mitigation would be required. Vehicular use on 7.5 miles of ways and 13 miles of new access roads would occasionally detract fropm the quality of opportunities for solitude and primitive recreation in the WSA.

TURTLE CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (33,690 Acres)	Partial Wilderness (27,960 Acres)
Impacts on Mineral and Energy Exploration and Production	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims, and mineral development would not be restricted for protection of wilderness values.	Opportunity to recover about 27 million tons of coal and an estimated 10 to 50 million barrels of oil and 60 to 300 billion cubic-feet of natural gas would be foregone. There would not be a significant loss of production of locatable and salable minerals because the probability of development is low even if the area is not designated wilderness.	Oil and gas leasing would not be allowed on 83 percent of the WSA and existing leases would expire before production. Therefore, an unknown but locally significant amount of oil and gas production would be foregone. The highest potential for oil and gas is expected to be within the southern (nondesignated) portion and eastern areas of the WSA. Recovery of about 27 million tons of coal would be foregone. Loss of exploration and development opportunities for other minerals would not be significant because the probability of development is low even if the area is not designated wilderness.
Impacts on Wildlife Habitat and Populations	About 1 percent (330 acres) of the wildlife habitat in the WSA would be disturbed by oil, gas, and coal exploration and development. This would reduce the carrying capacity of the area for big game species and also reduce potential nesting habitat for the peregrine falcon. However, these species still have the potential to increase over present numbers. Although the acreage of disturbance is minimal, the habitat impacted by increased human activity in the area could be much greater due to the 20 miles of access roads that may be needed in mineral exploration and development.	Wildlife species would be protected and provided with additional solitude. Populations of some species, especially game species, would increase. Threatened, endangered, and other special status species would be protected.	About 0.2 percent of the habitat in the WSA would be disturbed. Impacts to wildlife species with this alternative would be very similar to those of the All Wilderness Alternative because of the small amount of disturbance.

TURTLE CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation No Action/No Wilderness	All Wilderness (33,690 Acres)	Partial Wilderness (27,960 Acres)
		Alternatives	
Impacts on Economic Conditions	Present economic conditions would not be affected. Employment in coal, oil, and gas exploration and development in the WSA would represent about 1.7 percent (340 jobs) of the projected combined Carbon and Emery County employment by the year 2010. There would be minor changes in local economic conditions. The WSA could contribute up to $18,040 annually in local sales related to recreation. Livestock grazing in the WSA would continue to contribute $3,380 in livestock sales and $260 in Federal grazing revenues each year. Oil and gas and coal leasing fees could contribute up to $74,460 annually in Federal and State revenues. In addition, coal royalties from eh WSA would contribute about $4,000,000 per year for about 14 years while gas royalties could bring between $20,000 and $100,000 per year per well.	Present economic conditions would not be affected. The potential for 340 jobs, 1.7 percent of the projected combined Carbon and Emery County employment in the year 2010 would be foregone. Annual local recreation-related sales could contribute up to $18,040 annually to the local economy by the year 2020. Livestock grazing would continue to contribute $3,380 in livestock sales and $260 in Federal revenues annually. Annual oil, gas, and coal leasing fees of up to $74,460 would be foregone as would coal royalty payments of about $4,000,000 annually for 14 years and oil and gas royalties of between $20,000 and $100,000 per well per year.	Present economic conditions would not be affected. Employment for oil and gas exploration and development in the WSA would be about 0.1 percent (20 jobs) of the combined projected Carbon and Emery County employment by the year 2010. Because coal and an unknown portion of the potential oil and gas in the WSA would not be developed, up to 320 fewer jobs would be provided than with the No Action/No Wilderness Alternative. Annual local sales related to recreation could contribute up to $18,040 annually by the year 2020. Livestock grazing would continue to contribute $3,380 in livestock sales and $260 in Federal revenues annually. Annual oil and gas and coal leasing fees of up to $62,900 would be foregone as would coal royalty payments of up to $4,000,000 annually for 14 years and oil and gas royalties of between $20,000 and $100,000 per well per year. The loss of oil and gas rental fees would be less than with the All Wilderness Alternative because 17 percent of the WSA, including the area with the highest potential for oil and gas, would not be designated wilderness.

Floy Canyon WSA



FLOY CANYON WSA

Floy Canyon WSA Proposal
UT-060-068B

RECOMMENDED FOR WILDERNESS

RECOMMENDED FOR NON-WILDERNESS

NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY

STATE LAND WITHIN WSA BOUNDARY

PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

T. 19 S.

T. 20 S.

R. 17 E.

R. 18 E.

R. 19 E.

October 1991

FLOY CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 72,605 acres

The Floy Canyon Wilderness Study Area (WSA) (UT-060-068B) is in Grand County, about 9 miles east-northeast of Green River, Utah (population 1,048), and about 4 miles north of Interstate Highway 70 (I-70). The study area is about 11 miles from north to south and 21 miles from east to west. The WSA is adjacent to the Desolation Canyon WSA (UT-060-068A) on the west and the Coal Canyon WSA (UT-060-100C) on the east, and is one of a group of seven contiguous WSAs in the Book Cliffs. The boundary is irregular, formed along roads, breaks in terrain, and State sections (see Map).

The WSA contains 72,605 acres of public land administered by the Bureau of Land Management (BLM). Eight State sections (4,509 acres) and one 1/4 section (160 acres) of private land are inheld in the WSA. Four State sections (2,468 acres) are in the portion that is recommended for wilderness designation. No private lands are in the recommended wilderness area.

The study area is in rugged terrain between the face of the Book Cliffs and the higher Roan Cliffs to the north. Steep ridges and numerous V-shaped canyons are characteristic of the WSA.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	72,605
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	4,669
Total	77,274
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	23,140
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	23,140
In-holdings (State, private)	2,468
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	49,465
Split-Estate	0
Total BLM land not recommended for wilderness	49,465
In-holdings (State, Private)	2,201

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The southern boundary of the WSA is the top of the 1,000 foot escarpment of the Book Cliffs. Elevations in the WSA range from 5,000 feet in Floy Canyon, at the southern edge of the WSA, to 9,496 feet, at the north end of the study area. Douglas fir and pinyon-juniper together constitute almost 80 percent of the vegetative cover.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 23,140 acres would be designated as wilderness and 49,465 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
23,140 acres
(recommended for wilderness)
49,465 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 23,140 as wilderness and to release the remaining 49,465 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

The recommended portion is the northern part of the WSA which is comprised of rugged parts of the Roan and Book Cliffs. All of the area is in a natural state and has outstanding opportunities for solitude and primitive recreation. Scenic, geologic, historical, and archaeological values are exceptional.

The northeastern part of the recommended area borders, and wilderness management would be compatible with, the Uintah and Ouray Indian Reservation Hill Creek Extension which is managed to preserve its roadless character and primitive natural values. Oil and gas resources are indicated throughout the WSA, including the recommended portion, but the rugged terrain severely constrains access. Other localities in the vicinity, including the southern portion of the WSA, are considered more feasible for exploration. No significant conflicts exist with other minerals or other resource and land uses.

All of the portion of the WSA which is not recommended for wilderness designation is in a natural state and has outstanding opportunities for solitude and 73 percent of the area has outstanding opportunities for primitive recreation. The southern portion, about 52 percent, of the area is within a known recoverable coal resource area, as part of the Sego Coal Field. Coal mining is not predicted in the near future, but may have long-term potential. Oil and gas resources may be discovered in part of the area, which is accessible mostly from the south. Mineral and energy development potential outweighs the importance of the wilderness values in the southern two thirds of the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Although imprints exist, they are substantially unnoticeable in the area as a whole and the entire WSA meets the wilderness standards for naturalness. Imprints of human activity in the WSA resulted from mineral exploration, ranching activities, and recreation. The pattern of imprints is limited to accessible areas. Such areas are the lower terrain above the Book Cliffs in the south and within the canyons that cross the WSA. Overall the WSA

appears to be in an unaltered condition.

Human imprints in the WSA include the following: (1) a post-FLPMA rehabilitated vehicle way approximately 2.5 miles in length in the Dry Fork of Floy Canyon; (2) a pre-FLPMA vehicle way approximately 6 miles long in Floy Canyon; (3) five abandoned pre-FLPMA coal mines of about 5 acres each; (4) an abandoned pre-FLPMA uranium mine that affected about 5 acres near Cub Spring in Horse Canyon; (5) an abandoned pre-FLPMA jeep trail system extending approximately 10 miles in the Tom Farrer Valley and Showerbath Spring area; (6) a pre-FLPMA corral and spring in Floy Canyon; (7) a pre-FLPMA corral and evidence of early logging activities in Thompson Canyon; (8) pre-FLPMA log cabins in Right Hand Thompson Canyon and Sego Canyon; (9) a pre-FLPMA way approximately 5 miles long in Thompson Canyon; (10) evidence of an old road leading to a coal mine on private property in Coal Canyon; (11) a recently rehabilitated pre-FLPMA oil and gas lease drill site; (12) a developed spring including a trough, barrel, and pipe in Tom Farrer Valley; (13) a developed spring consisting of a 1.5-inch diameter rubber hose and a cement trough in Showerbath Canyon; (14) a developed but still primitive spring at the mouth of Horse Canyon; (15) two stock ponds; and (16) approximately 15 drift fences.

Since establishment of the WSA, less than 5 acres of the WSA have been disturbed. This disturbance resulted from (1) helicopter seismic work in Floy Canyon during September 1984. Each seismic charge along a 4-mile stretch of way in Floy Canyon impacted approximately a 3-foot radius circular area. And (2) approximately 2.5 miles of road in Dry Fork Canyon constructed on public land to gain access to in-held State lands to conduct drilling operations. The well was abandoned on June 3, 1982 and reclamation work was completed during 1983. Because these areas have been reclaimed to a substantially unnoticeable condition, the entire WSA meets the Wilderness Act Criteria for naturalness.

B. Solitude

The deeply incised, branching drainages in the WSA allow dispersion of recreational use and provide for outstanding solitude in approximately 95 percent (68,975 acres) of the WSA, which meets the requirements for outstanding opportunities for solitude. The remaining 5 percent (3,630 acres) that does not meet the standard lacks vegetation and terrain that would provide screening necessary to eliminate outside sights and sounds.

The size, configuration, and topographic characteristics of the WSA enhance opportunities for solitude. Canyons from 500 to 3,000 feet deep are separated by ridges and peaks in the north and benches or plateaus in the south.

The Floy Canyon WSA contains over 50 miles of canyon bottom. The bottoms vary in width from about 10 feet to a 0.5 mile. Lines of sight along the bottoms rarely exceed a 0.5 mile and are usually considerably less. Canyons in the north half of the unit are more V-shaped in their lower portions. Canyons in the south and west are more distinctly terraced with vertical walls separating talus slopes. The vertical walls range from 100 to 1,000 feet. In most of the WSA, terrain provides outstanding opportunities for solitude due to screening.

In about 75 percent (54,450 acres) of the WSA, mostly in the north, vegetation augments opportunities for solitude by providing additional screening. Significant cover by large trees and large shrubs occurs in the canyons and on the ridges, especially on northern exposures and in higher elevations. The canopy of trees in the pinyon-juniper/Douglas fir type creates closed or nearly closed areas. The tree canopy in Douglas fir, Ponderosa pine, Gambel's oak, and aspen types is closed. While tree canopy is more open in the pinyon-juniper type, it combines with large brush species to provide fairly continuous cover. The remaining 25 percent (18,155 acres) of the WSA, in the lower southern and southwestern parts of the WSA, is dominated by sheer-faced cliffs, rock outcrops, and smaller shrubs.

Roads and traveled ways negatively affect opportunities for solitude when vehicular use occurs. Approximately 2 miles of road and 6 miles of way up Floy

Canyon are used mostly by ranchers and recreationists. Most of the use along the travel routes occurs in the fall. Vegetation along the travel routes is sagebrush and Gambel's oak. Average height of these species is 5 feet. The ability to find seclusion is possible because of the side slopes and thick tree cover. Sights and sounds of vehicular traffic within the unit is limited to immediate exposure or when seen from higher elevations.

A road between Coal Canyon and the Right Hand Tusher makes up the southwestern boundary of the WSA. Travel along this route is also associated with recreation and ranching. Opportunities for solitude in some points adjacent to the road, where it is within a 0.5 mile of a talus slope and sheer cliff to the north, is less than outstanding due to limited distance. In other portions between the road and cliff or plateau top, the rugged landscape of huge boulders and long fingered ridges allows for seclusion.

The ridge tops and high benches of the WSA offer extensive overlooks of the rugged terrain and impressive vertical relief within the area. Views can be seen of mountain ranges outside the WSA to the south, northwest, and west, 50 to 100 miles away. The San Rafael Reef, a prominent feature to the west, can be seen from many points in the WSA. Expansive views enhance the feeling of solitude within the WSA.

C. Primitive and Unconfined Recreation

The entire WSA meets the requirements for outstanding opportunities for primitive and unconfined recreation. The WSA's extensive canyon systems, ridges, abundant springs, wildlife trails, and old travel routes provide outstanding opportunities for a variety of primitive and unconfined recreational activities. Hiking, backpacking, horsepacking, winter sports, hunting, wildlife observation, sightseeing, and photography are some of the opportunities available.

Foot trails largely comprised of old mining and game routes are suitable for hiking and horsepacking within all of the canyons. Included are routes from the west side of Ute Canyon to Tom Farrer Valley into Cub Valley or Horse Canyon, and from the east side of Ute Canyon into Showerbath Canyon. Possible routes exist from Showerbath Canyon to Floy Canyon, and from Floy Canyon to Thompson Canyon, Renegade Canyon or the Right Hand of Thompson Canyon. Springs can be found in the mouth of Horse Canyon, the upper part of Middle Horse and Crescent Canyons, and in Floy, Dry Fork, Left and Right Hand Threeforks, Thompson, Right Hand Thompson, Renegade, Showerbath, Ute, Right Hand Tusher, and Sego Canyons. The springs are a good source of drinking water for recreationists in the area.

The western and southern parts of the WSA are comprised of plateaus and ridges with steep cliffs. Finding routes is difficult and challenging. Water is scarce outside the canyons. Old mining routes in several canyons in the south part of the WSA provide access to the higher plateaus.

Hunting opportunities for both big and small game are exceptional in the Book Cliffs. Black bear, cougar, deer, elk, rabbit, and chukar hunting opportunities are excellent. The area has limited vehicular access and most hunting is done on foot or horseback.

From the south to the north, interesting colors and rock formations are present, adding interesting scenic quality to the unit. Along the southern portion, the sheer-walled plateau face is interrupted by a collapsed area where there is a field of hoo-doos, i.e., pedestals of soil holding up slabs of rock. Tall pedestals of less resistant soils hold the huge rock slabs of a more resistant nature. A finely carved barrel-shaped chute also exists within the drainage's route. Several other places in the unit's southern half expose such character. The northern terrain is a colorful mix of interesting pinnacles and rock figures. Outstanding sightseeing and photography values are emphasized by these features. Waterfalls and a mix of vegetation add interest to the winding canyon bottoms, especially in the northern portion of the unit.

The many drainages and the dissected terrain provide hundreds of potential hiking routes up canyon bottoms and along ridge tops.

Opportunities for hiking, backpacking, and hunting are outstanding throughout the WSA.

D. Special Features

The WSA contains supplemental scenic, geologic, and cultural values. The northern part of the WSA, notably Sego Canyon, Thompson Canyon and its tributaries, Floy Canyon and its tributaries, Showerbath Canyon, Ute Canyon, and the head of Horse Canyon and its tributaries include scenic areas. Rock outcrops, pinnacles and chimneys, soil colors, dense and varied mixtures of vegetation, and waterfalls and streams enhance the visual character of the area.

Approximately 93 percent (67,500 acres) of the WSA is rated as outstanding for scenic quality. In the southern portions of the unit there are unusual formations such as rock pedestals and dramatic and textured cliff faces. An unusual strata exposed in the northern portions of the WSA along the Book Cliffs is the conglomerate Wasatch Formation. The dark-brown cobblestone layer, ranging from 5 to 20 feet thick, is related to discontinuous and ancient stream channeling.

Cultural values, such as historic log cabins and related trails, exist within the unit. The WSA has populations of cougar, elk, and black bear which are wildlife species associated with wilderness. Also, Rocky Mountain bighorn sheep may occasionally enter the WSA. Black-footed ferrets, peregrine falcons, and bald eagles, listed as endangered species, and six other animal species considered sensitive may inhabit or visit the WSA. One plant species that is considered sensitive also may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Douglas fir forest (7,680 acres), juniper-pinyon woodland (44,525 acres), mountain mahogany-oak scrub (18,480 acres), and saltbush-greasewood (1,920 acres). The juniper-pinyon woodland and saltbush-greasewood PNV types are represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah, although saltbush-greasewood PNV is represented in the NWPS only in Utah. The Douglas fir forest and mountain mahogany-oak scrub PNV types are not currently represented at all in the NWPS.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (Five Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and the Provo-Orem, Utah, standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	61,590
Juniper-Pinyon Woodland	11	1,401,745	84	2,099,480
Mountain Mahogany-Oak Scrub	0	0	4	13,381
Saltbush-Greasewood	1	20,000	17	392,083
UTAH (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	61,590
Juniper-Pinyon Woodland	1	26,000	53	1,661,673
Mountain Mahogany-Oak Scrub	0	0	4	13,381
Saltbush-Greasewood	1	20,000	17	392,083

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,187,070
Provo-Orem, Utah	11	721,793	90	2,714,263

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Floy Canyon WSA could contribute to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Floy Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas. There is only one designated wilderness area within 100 miles of the WSA. This is the 45,000-acre Dark Canyon Wilderness south of the WSA (U.S. Forest Service [FS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness can be managed to preserve values now present in the area. Livestock grazing and maintenance of existing fences and three developed springs would continue but would not significantly affect wilderness values in the area. There are 11,283 acres of post-FLPMA oil and gas leases in the WSA. About 6,113 acres of the leases are in the area recommended for wilderness. All of these leases are subject to stipulations for the protection of wilderness values. Therefore, it is assumed that if the area is designated as wilderness, the existing leases will expire

prior to production and new leases will not be issued.

There are presently 80 acres of mining claims in the WSA. None are in the recommended area, and the probability of future valid claims is low throughout the WSA because only minor occurrences of uranium are thought to be in the area.

Provision of access to and activities on four sections (2,468 acres) of State land in-held in the portion of the WSA recommended as wilderness could affect wilderness values and uses in the surrounding wilderness. BLM would be obligated to provide access to the State sections and could not administratively control development on State land. BLM projects that at least 1 mile of access road to State land would be required through the area following wilderness designation.

The area not recommended for wilderness also could be effectively managed to protect wilderness values. There are 5,170 acres of post-FLPMA oil and gas leases, four in-held State sections, and 160 acres of private land in this area where the terrain is more accessible. However, the leases are subject to stipulations for the protection of wilderness values and would not be a manageability problem if the area were designated wilderness.

The presence of four State sections and 160 acres of private land in-held in the nonrecommended area could complicate wilderness management, but the sections are widespread and activities may not affect the overall manageability of the area. BLM projects that about 4 miles of access road for State and private lands would be required through the nonrecommended area if it were designated as wilderness.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Floy Canyon WSA (USGS Bulletin 1753, William B. Cashion, et al., N.D.). The report indicates that coal deposits underlie the Floy Canyon WSA. Identified bituminous coal resources in beds 3.5 feet or more thick and under 2,000 feet or less of overburden are estimated to be about 45 million tons in the study area. Mineral resource potential is estimated to be high for coal; moderate for oil and gas; low for bituminous sandstone, tar sand, oil shale, bentonite, zeolites, geothermal energy, and all minerals other than uranium; and unknown for coal bed methane. Minor occurrences of uranium have been found in the basal part of the Wasatch Formation in the Western part of the Floy Canyon WSA. There is moderate potential for occurrences of uranium in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness designation, present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1 percent (40 jobs) by the year 2010, but the duration of the increase would be shorter than with the No Action/No Wilderness Alternative because development would not occur on 32 percent of the WSA. Recreation-related local sales could contribute up to $10,701 annually to the local economy by the year 2020. Annual local sales and Federal revenues related to livestock grazing could be reduced by $1,740 and $174 respectively because only a portion of a proposed vegetation treatment would be possible. Annual Federal and State revenues from potential oil and gas leasing fees could be reduced by $46,380 as compared to the No Action/No Wilderness Alternative. Annual royalty payments on oil and gas production would not be reduced, but total royalties from the oil and gas field would be reduced because development and production would be foregone on 32 percent of the WSA. Federal revenues from commercial recreation outfitting would probably increase if the area receives recognition from wilderness designation.

FLOY CANYON WILDERNESS STUDY AREA

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 95 inputs specifically addressing this WSA were received from 101 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 87 commenters supported wilderness designation for part or all of the WSA, while seven commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA contains wilderness values and has no mineral-related conflicts in uses of the area. The majority of those commenting in favor of wilderness were from outside Utah and from urban areas in Utah. Of particular concern was the need to protect wilderness values and wildlife habitat.

Those opposing wilderness were concerned that wilderness would restrict livestock grazing management and harm local and State economies. The opinion was expressed that wilderness is incompatible with multiple use. Most of those opposing wilderness designation were from urban and rural parts of Utah.

No Federal agencies commented on the Draft EIS or expressed opinions regarding wilderness designation of this WSA.

No comment letters were received on the Final EIS.

There are eight State sections (4,509 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation for the WSA. The State commented that the Floy Canyon WSA has moderate wilderness quality values and moderate conflicts compared with the other WSAs in the region. According to the State, conflicts are with coal, other mineral values and livestock uses which probably would not be reduced except by the no action alternative. The State also noted that high cultural and wildlife values are present in the WSA. Additionally, the State made corrections to the number of acres given for State in-holdings; agreed that significant oil shale beds are unlikely to occur in the WSA; complimented the BLM for its information on cultural resources; questioned recreation visitation estimates; and suggested a correction regarding the number of acres in the nondesignated area for the partial wilderness alternative.

The Floy Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Floy Canyon WSA is interspersed with signs of modern man, including roads that are used for ranching and recreation. The Commission also noted that designation of the area as wilderness would be contrary to the County's overall planning goals and that the geology and ecology of the area is repetitious of the adjacent State roadless area and tribal lands that are managed as roadless. The Commission believes the WSA contains substantial natural resources and that wilderness designation would adversely affect State and local economies.

FLOY CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (23,140 Acres)	Alternatives No Action/No Wilderness	All Wilderness (72,605 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 32 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 317 acres because of mineral exploration and development, construction of access roads to in-held State lands, and instream structures. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 3,630 acres. Almost all of the impact would be in the nondesignated area. Special features would not be significantly affected. Some Class A scenery would be reduced in quality in the disturbed and adjacent areas and some wilderness dependent species would temporarily leave the area. Use of 13 miles of vehicular ways and new roads in the nondesignated portion would detract from opportunities for solitude and primitive recreation.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 1,077 acres because of vegetation treatments oil and gas exploration and development construction of access to in-held State lands, and watershed treatments. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 10,890 acres of the WSA. Special features would generally not be significantly affected. Some Class A scenery would be reduced in quality in disturbed and surrounding areas and some wilderness dependent wildlife species would leave the area during the period of disturbance. Vehicular use of 24 miles of ways and new roads would occasionally detract from opportunities for solitude and primitive recreation.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 12 acres and indirectly reduced in quality on up to an additional 726 acres because of construction of access to in-held State lands. Special features would be preserved.
Impacts on Vegetation	Vegetation types and special status plant species would not be significantly impacted with this alternative because the potential for major disturbance would be eliminated on 32 percent of the WSA and protective measures would be required on the remainder of the area.	Approximately 1.5 percent (1,077 acres) of the vegetation in the WSA would be modified by this alternative. The Category 2 candidate species that may be located in the WSA would not be significantly affected because protective measures would be required.	Vegetation types and special status plant species would be protected because potential surface disturbance would be reduced from 1,077 acres to 12 acres and the area would be closed to ORV use.

FLOY CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (23,140 Acres)	No Action/No Wilderness	All Wilderness (72,605 Acres)
Impacts on Mineral and Energy Exploration and Production	Partial wilderness designation would preclude or constrain potential exploration and development of an unknown portion of the 10 to 50 million barrels of oil and 60 to 300 billion cubic feet of natural gas may occur in the WSA. Loss of exploration and development opportunities for other mineral and energy resources would not be significant because the probability of development is low even if a portion of the WSA is not designated wilderness.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims and mineral developments could occur without restriction for the protection of wilderness values.	Recovery of 10 to 50 million barrels of oil and 60 to 300 billion cubic feet of natural gas would be foregone. Loss of potential for recovery of other minerals would not be significant because the probability of development is low even if the area is not designated wilderness.
Impacts on Wildlife Habitat and Populations	Wildlife would benefit from a reduced acreage of surface disturbance when compared to the No Action/ No Wilderness Alternative. Only 0.4 percent of the habitat in the WSA would be disturbed. Approximately 205 acres of vegetation treatment would be allowed in the nondesignated portion, which would benefit some wildlife. Wildlife would not receive the additional benefit of solitude on the 49,465 acres not designated. Special status species would not be significantly affected because protective measures and mitigation would be required.	Implementation of the land treatment opportunity would benefit some wildlife species and population levels by providing additional forage and ecotones. Surface disturbance on 2 percent of the habitat in the WSA may displace some wildlife species during the lifetime of the projects. Special status species would not be significantly adversely affected because protective measures and mitigation would be required. Ferruginous hawks would benefit from habitat improvement.	Wilderness designation would preclude the proposed land treatment project which would have benefitted some wildlife species. Most wildlife species would benefit due to the preservation of solitude and crucial habitat. Special status species would be protected.
Impacts on Livestock Management	Restrictions on vehicle use on 11 miles of ways and predator control would be an inconvenience to the three permittees that operate the Showerbath Springs, Floy Canyon, and Thompson Canyon allotments. The cost of livestock management could increase slightly. Approximately 700 acres of vegetation treatment that would produce about 87 AUMs would not occur.	With this alternative, there would be no changes in livestock use or management techniques. Surface disturbances resulting from mineral exploration and development would not significantly impact grazing, since forage is currently underused in the WSA. The proposed 905-acre burning and seeding project could be completed to provide an additional 113 AUMs of livestock forage.	No change in livestock authorization would occur with this alternative. Restrictions on the use of 24 miles of ways and predator control would be an inconvenience and would result in increased costs of livestock management for nine livestock permittees. The proposed 905-acre burning and seeding that would produce 113 AUMs would not be allowed.

FLOY CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (23,140 Acres)	No Action/No Wilderness	All Wilderness (72,605 Acres)
	Alternatives		
Impacts on Local Economic Conditions	Present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1 percent (40 jobs) by the year 2010, but the duration of the increase would be shorter than with the No Action/No Wilderness Alternative because development would not occur on 32 percent of the WSA. Recreation-related local sales could contribute up to $10,701 annually to the local economy by the year 2020. Annual local sales and Federal revenues related to livestock grazing could be reduced by $1,740 and $174 respectively because only a portion of the proposed vegetation treatment would be possible. Annual Federal and State revenues from potential oil and gas leasing fees could be reduced by $46,380 as compared to the No Action/No Wilderness Alternative. Annual royalty payments on oil and gas production would not be reduced, but total royalties from the oil and gas field would be reduced because development and production would be foregone on 32 percent of the WSA. Federal revenues from commercial recreation outfitting would probably increase if the area receives recognition from wilderness designation.	Present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1.0 percent (40 jobs) by the year 2010. There would be only minor changes in local economic conditions. Recreation-related local sales could contribute up to $10,701 annually to the local economy by the year 2020. The WSA could contribute up to $58,760 annually in local livestock sales and $4,525 in grazing fees. Oil and gas leasing fees and royalty payments could contribute from $145,210 to over $100,000 per year in Federal and State revenues. Federal revenues from commercial recreation outfitting (currently $160 annually) would continue.	Present economic conditions would not be affected. The potential for 40 jobs, 1 percent of the projected Grand County employment in the year 2010, would be foregone. Recreation-related local sales could contribute up to $10,701 annually to the local economy by the year 2020. Annual local sales and Federal revenues related to livestock grazing could be reduced by $2,260 and $174 respectively because the proposed vegetion treatment would not be possible. Annual Federal and State revenues from oil and gas leasing fees and royalty payments could be reduced by $145,210 to over $100,000 as compared to the No Action/No Wilderness Alternative. Federal revenues from commercial recreation outfitting would probably increase if the area received recognition from designation.

FLOY CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

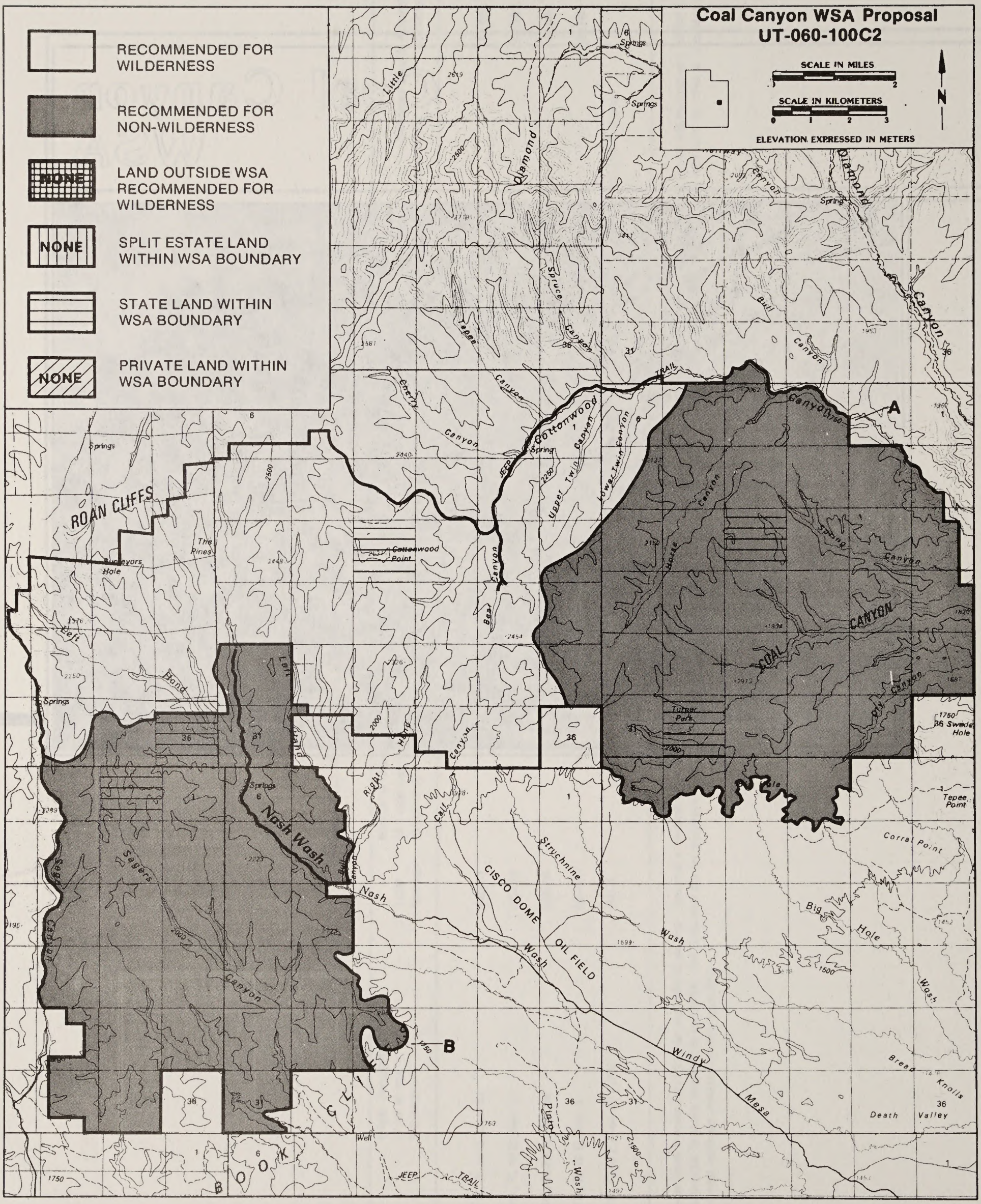
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 19 S., R. 19 E., Sec. 32	640.37		State	State	No	Exchange		$2,000
T. 19 S., R. 19 E., Sec. 36	636.32		State	State	No	Exchange		$2,000
T. 19 S., R. 20 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 20 S., R. 19 E., Sec. 2	551.76		State	State	No	Exchange		$2,000
T. 20 S., R. 17 E., Sec. 35 NENE	160.0		Private	Provate	No	Purchase	$9,600-$12,300	

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Coal Canyon WSA



COAL CANYON WSA



October 1991

COAL CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 61,430 acres

The Coal Canyon Wilderness Study Area (UT-060-100C) is in Grand County, about 25 miles northeast of Green River, Utah (population 1,048) and 10 miles north of Interstate Highway 70 (I-70). The study area is shaped like the letter "L", oriented with the long dimension east to west (16 miles) and the "base" north to south (12 miles). The WSA is contiguous with the Floy Canyon WSA (UT-060-068B) to the west and the Spruce Canyon WSA (UT-060-100C) to the north, and is one of seven contiguous WSAs in the Book Cliffs.

Roads, legal subdivisions, and breaks in terrain form the boundary of the WSA (see Map). The WSA contains 61,430 acres of public land administered by the Bureau of Land Management (BLM).

Five State sections (3,116 acres) are inheld within the WSA. One of these sections (640 acres) is within the area recommended for wilderness.

There are no private or split-estate lands in the WSA (see Table 1).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	61,430
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,116
Total	64,546
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	20,774
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	20,774
In-holdings (State, private)	640
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	40,656
Split-Estate	0
Total BLM land not recommended for wilderness	40,656
In-holdings (State, Private)	2,476

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

COAL CANYON WILDERNESS STUDY AREA

The landscape in the study area is typical of the rugged terrain between the Book Cliffs and the top of the Roan Cliffs. V-shaped canyons separated by steep, narrow ridges drain north and east into Cottonwood Canyon in the eastern portion of the WSA and south into Nash Wash in the western portion. Elevations range from 5,200 feet in Coal Canyon, at the southern edge of the WSA, to 8,900 feet on Cottonwood Point in the north central portion. Almost 90 percent of the study area is covered by pinyon-juniper, Douglas fir, and mountain shrub.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 20,774 acres would be designated as wilderness and 40,656 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. <u>RECOMMENDATION AND RATIONALE</u>:
   20,774 acres
   (recommended for wilderness)
   40,656 acres
   (not recommended for wilderness)

The recommendation for this WSA is to designate 20,774 acres as wilderness and to release the remaining 40,656 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

The recommended portion is the northern third of the WSA which is comprised of rugged parts of the Roan and Book Cliffs. All of the area is in a natural state and has outstanding opportunities for solitude and primitive recreation. Scenic, geologic, historical, and archaeological values are exceptional.

The WSA, together with the Desolation Canyon and Floy Canyon WSAs to the west and Spruce Canyon and Flume Canyon WSAs to the east, if designated as wilderness would preserve a 50 mile segment of the east-west trending rugged and wild Book Cliffs. The northern part of the recommended area borders a roadless block of State land and is adjacent to the Uintah and Ouray Indian Reservation Hill Creek Extension which is managed to preserve its roadless character and primitive natural values.

Oil and gas resources are indicated throughout the WSA, including the recommended portion, but the rugged terrain severely constrains access. Other localities in the vicinity, including the nonrecommended portion of the WSA (Areas A and B), are considered more feasible for exploration. No significant conflicts exist with other minerals or other resource and land uses except for closure of 2.5 miles of existing vehicle ways.

All of the portion of the WSA which is not recommended for wilderness designation (Areas A and B) is in a natural state and has outstanding opportunities for solitude. About 73 percent of the area has outstanding opportunities for primitive recreation. A high potential for mineral and energy development also exists in this portion, however.

About 42 percent of the area not recommended for wilderness designation is within a known recoverable coal resource area, as part of the Sego Coal Field. Coal mining is not predicted in the foreseeable future, but may have long-term potential. There are 1,820 acres of post-FLPMA oil and gas leases and 2,335 acres of leases in a unit agreement held by production in this part of the WSA. Oil and gas resources may be discovered in part of the area, which is accessible mostly from the south. Mineral and energy development potential outweighs the importance of wilderness values in the southern and southeastern two thirds of the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. With a few small exceptions the WSA meets the criteria for naturalness. Grazing has occurred on ridges and in canyon bottoms, but not on the steep side slopes. Mineral exploration, primarily for oil and gas, has taken place in side canyons off Diamond and Cottonwood Canyons. The areas involved, either directly or indirectly in grazing and mineral exploration total about 30,715 acres (50 percent of the WSA). The remainder of the WSA (30,715 acres or 50 percent) can be considered pristine.

Human imprints within the Coal Canyon WSA are mainly in or near the central part of the WSA. For the most part, they are capable of being reclaimed to a relatively natural condition. These imprints consist of a dry drill hole site, which has been plugged and abandoned, covering 5 acres; two shut-in drill holes, capable of production, each covering 5 acres, one of which is at the end of a cherry-stemmed road; and two other dry holes, each covering 5 acres. In each case, the 5 acres include the cleared work area and drill pad. Access routes lead to each drill site. About 8 miles of vehicle ways are within the WSA. With these exceptions, which only affect a small portion of this rugged, heavily vegetated area, the WSA is in a relatively unaltered condition.

B. Solitude

All in all, the entire WSA meets the requirements for outstanding opportunities for solitude.

The large size and blocky configuration of the WSA contribute to a feeling of vastness, and the rugged terrain and isolation of the WSA provide outstanding opportunities for the visitors to find solitude.

The terrain provides screening which obscures the sights and sounds of others within the WSA. The relief between ridge tops and canyon bottoms (up to 1,000 feet) enhances seclusion and the feeling of isolation. This characteristic is more pronounced in the northwestern portion of the WSA.

The effectiveness of vegetation screening is less on steep slopes where there are wide bands of bare rock. Areas of Douglas Fir Forest in higher elevations provide better screening. Areas of mountain shrub provide dense thickets, but screening potential is largely determined by overall vegetation height. Canyon bottoms vegetated with sage generally do not provide cover from lines of sight from slopes and ridge tops above.

Sights and sounds from outside the WSA include drilling along boundary roads, pipeline development, and the use of motorized equipment along the perimeter of the WSA. Because of the size and nature of the WSA, the effect of these activities on wilderness values is insignificant.

Vistas toward the southeast, from Diamond Ridge and other high points, could give visitors a feeling of vastness.

The deeply incised, branching drainages within the WSA provide many travel routes that allow dispersion of recreational use.

C. Primitive and Unconfined Recreation

The entire WSA meets the requirements for outstanding opportunities for primitive and unconfined recreation.

The many drainages and the dissected terrain provide several potential hiking routes up canyon bottoms and along ridge tops. Opportunities for hiking and backpacking are considered outstanding throughout the WSA, as are opportunities for hunting. Logical travel routes are along the headwaters of the various drainages at the northern end of the WSA.

D. Special Features

Some erosional features of scenic interest occurring in the WSA are pinnacles,

balanced rocks, alcoves, overhangs, potholes, pockmarks, and arches. The entire WSA is rated outstanding for scenic quality.

The WSA covers part of an area of critical watershed and provides habitat for animals that avoid areas of human occupation.

The WSA has year-round populations of elk, cougars, and black bears, which are animals associated with wilderness.

Black-footed ferrets, an endangered species, and six other animal species considered sensitive, may be present in the WSA.

One plant species that is considered sensitive also may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is Douglas fir forest (2,500 acres), juniper-pinyon woodland (34,229 acres), mountain mahogany-oak scrub (7,500 acres), and saltbush-greasewood (17,201 acres).

The juniper-pinyon woodland and saltbush-greasewood PNV types are represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah, although the saltbush-greasewood PNV type is in the NWPS only in Utah.

Douglas fir forest and mountain mahogany-oak scrub PNV types are represented in other BLM study areas only in Utah but are not currently represented at all in the NWPS.

This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (Five Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah, standard metropolitan statistical areas.

Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Coal Canyon WSA could contribute to balancing the geographic distribution of wilderness areas within the NWPS.

As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Coal Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas.

There are two designated wilderness areas within 100 miles of the WSA. To the south is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]) and to the east in Colorado is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness can be managed to preserve values now present in the area.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	66,770
Juniper-Pinyon Woodland	11	1,401,745	84	1,624,706
Mountain Mahogany-Oak Scrub	0	0	4	24,361
Saltbush-Greasewood	1	20,000	17	376,802
UTAH (COLORADO PLATEAU PROVINCE)				
Douglas Fir Forest	0	0	2	66,770
Juniper-Pinyon Woodland	1	26,000	53	1,614,410
Mountain Mahogany-Oak Scrub	0	0	4	24,361
Saltbush-Greasewood	1	20,000	17	376,802

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,198,245
Provo-Orem, Utah	11	721,793	90	2,725,438

Source: BLM File Data.

Livestock grazing and maintenance of existing fences would continue but would not significantly affect wilderness values in the area.

There are 3,610 acres of pre-FLPMA and 1,820 acres of post-FLPMA oil and gas leases in the WSA. About 2,335 acres of the pre-FLPMA and all of the post-FLPMA leases are in the area recommended for wilderness. Because of the oil and gas potential of the WSA, BLM projects that leases will be explored and may be developed in the recommended wilderness following designation. However, because of the limitations of the terrain, it is expected that only about 22 acres will be disturbed. This would not affect the overall manageability of the area. There are presently no mining claims in the recommended area, and the probability of future valid claims is low.

Provision of access to and activities on one section (640 acres) of State land in-held in the portion of the WSA recommended as wilderness could affect wilderness values and uses in the surrounding wilderness. BLM would be obligated to provide access to the State section and could not administratively control development on State land. However, the in-held section is on the extreme northern boundary of the recommended wilderness and, therefore, would likely not

affect the overall manageability of the area.

It would be more difficult to manage the nonrecommended area for its wilderness values. There are 1,275 acres of pre-FLPMA oil and gas leases and four in-held State sections in this area where the terrain is more accessible. BLM projects that up to 33 acres of the nonrecommended area would be disturbed following wilderness designation by oil and gas activities, including 14 miles of new road.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Coal Canyon WSA (USGS Bulletin 1753-A, Robert P. Dickerson, et al., 1990). The report indicates that demonstrated coal reserves totaling 22,060,800 short tons and demonstrated subeconomic coal resources totaling 39,180,000 short tons are in western and southern portions of the WSA. Also, inferred subeconomic coal resources totaling 143,954,000 short tons are within the study area. No known deposits of industrial minerals are known to be in the WSA. The study area has a high resource potential for undiscovered deposits of coal and for undiscovered oil and gas. There is a low resource potential for tar sand, oil shale, gilsonite, uranium and other metals, and geothermal energy in the study area.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness designation, present economic conditions would not be affected. The length of oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 30 percent of the area. Annual local sales and Federal revenues related to livestock grazing could be reduced by $120 and $9 respectively as compared to the No Action/No Wilderness Alternative. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $36,878. Annual royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced but potential royalties of up to $100,000 per year from potential wells on 30 percent of the WSA would be foregone. Recreation-related local sales would be about the same as with the No Action/No Wilderness Alternative. Federal revenues from commercial recreation outfitting would probably increase if the area receives recognition from wilderness designation.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 92 inputs specifically addressing this WSA were received from 103 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 90 commenters supported wilderness designation for part or all of the WSA, while four commenters were opposed. Nine commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA contains wilderness values, does not have conflicts with mineral-related interests, and that designation would complement adjacent wilderness. The majority of those commenting in favor of wilderness were from urban Utah and other states. Of particular concern was the need to protect wilderness values and wildlife and wildlife habitat in the WSA.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development, restrict public access, and conflict with the use of private and State lands. Most of those opposing wilderness designation were from rural Utah.

No Federal agencies commented specifically on the Draft EIS for this WSA or expressed an opinion regarding wilderness designation for the area.

No comment letters were received on the Final EIS.

There are five State sections (3,116 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation for the WSA. That State commented that the Coal Canyon WSA has moderate wilderness values and moderate to high conflicts compared with the other WSAs in the region; the area contains important wildlife habitat; and land use conflicts with wilderness management include coal, other mineral and energy resources, and livestock uses. The State also noted that parts of the WSA along with the adjacent Spruce Canyon and Flume Canyon WSAs could be considered for Areas of Critical Environmental concern to protect wildlife if not designated wilderness. The State also commented that BLM had underestimated the petroleum potential of the WSA.

The Coal Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Coal Canyon WSA cannot be effectively managed as wilderness because of inheld and adjacent State lands, and pre-FLPMA oil and gas leases. The Commission also noted that designation of the area as wilderness would be contrary to the county's overall planning goals and that the geology and ecology of the area is repetitious of the adjacent State roadless area and tribal lands that are managed as roadless.

COAL CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (20,774 Acres)	Alternatives No Action/No Wilderness	All Wilderness (61,430 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 34 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 458 acres because of mineral exploration and development, construction of access roads to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 12,286 acres. Almost all of the impact would be in the nondesignated area. Some special features would not be affected. Class A scenery would be reduced in quality in the disturbed and adjacent areas and some wilderness dependent species would temporarily leave the area. Use of 5.5 miles of vehicular ways and up to 45 miles of new roads mostly in the nondesignated portion would detract from opportunities for solitude and primitive recreation.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 526 acres because of vegetation treatments oil and gas exploration and development, construction of access to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 15,357 acres of the WSA. Some special features would not be affected. Class A scenery would be reduced in quality in disturbed and surrounding areas and some wilderness dependent wildlife species would leave the area during the period of disturbance. Vehicular use of 8 miles of ways and up to 55 miles of new roads would detract from opportunities for solitude and primitive recreation.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 55 acres and indirectly reduced in quality on up to an additional 1,843 acres because of oil and gas exploration and development on pre-FLPMA leases and construction of access to in-held State lands. Special features would generally be preserved, although Class A scenery would be reduced in quality in the disturbed and surrounding areas.
Impacts on Vegetation	Approximately 0.75 percent (458 acres) of the vegetation in the WSA would be modified. Vegetation types and special status plant species would not be significantly affected with this alternative because the potential for major disturbance would be reduced on 34 percent of the WSA. In addition, protective measures would be required on the remainder of the area.	Approximately 0.85 percent (526 acres) of the vegetation in the WSA would be modified with this alternative. The Category 2 candidate species that may be located in the WSA would not be significantly affected because protective measures would be required.	Vegetation types and special status plant species would be protected because potential surface disturbance would be reduced from 526 acres to 55 acres and the area would be closed to ORV use.

COAL CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (20,774 Acres)	No Action/No Wilderness	All Wilderness (61,430 Acres)
		Alternatives	
Impacts on Mineral and Energy Exploration and Development	Partial wilderness designation would preclude or constrain potential exploration and development of an unknown portion of 10 to 50 million barrels of oil and 60 to 300 billion cubic-feet of natural gas that may occur in the WSA because only about 70 percent of the WSA could be developed for oil and gas. Loss of exploration and development opportunities for other mineral and energy resources would not be significant because the probability of development is low even if a portion of the WSA is not designated wilderness.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims, and mineral developments could occur without restriction for the protection of wilderness values.	The portion of the projected 10 to 50 million barrels of oil and 60 to 300 billion cubic-feet of natural gas in pre-FLPMA lease sin the WSA could be produced. Recovery of an unknown but locally significant amount of oil and gas would be foregone because only 6 percnt (3,610 acres) of the WSA could be developed for oil and gas. Loss of potential for recovery of other minerals would not be significant because the probability of development is low even if the area is not designated wilderness.
Impacts on Wildlife Habitat and Populations	Wildlife would benefit from a reduced acreage of surface disturbance when compared to the No Action/No Wilderness Alternative. Only 0.75 percent (458 acres) of the habitat in the WSA would be disturbed. Approximately 300 acres of vegetation treatment would be allowed in the nondesignated portion, which would benefit some wildlife. Wildlife would not receive the additional benefit of solitude on the 40,656 acres not designated. Crucial deer and elk winter range would be disturbed. Special status species would not be significantly affected because protective measures and mitigation would be required.	Implementation of the land treatment would benefit some wildlife species and population levels by providing additional forage and ecotones. Surface disturbance on 0.85 percent (526 acres) of the habitat in the WSA may displace or reduce populations of some wildlife species during the lifetime of the projects. Crucial winter range would be disturbed. Special status species would not be significantly adversely affected because protective measures and mitigation would be required.	Only about 0.09 percent (55 acres) of the habitat in the WSA would be disturbed. Wilderness designation would preclude the proposed land treatment project which would have benefitted some wildlife species. Most wildlife species would benefit due to the preservation of solitude and crucial habitat. Special status species would be protected.

COAL CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (20,774 Acres)	Alternatives No Action/No Wilderness	All Wilderness (61,430 Acres)
Impacts on Livestock Management	Livestock management practices and grazing levels would not be significantly affected. Only 6 AUMs of potential forage would be foregone because 46 acres of proposed vegetation treatment would not be allowed.	With this alternative, there would be no changes in livestock use or management techniques. Surface disturbances resulting from mineral exploration and development would reduce forage production by about 7 AUMs per year. This would not significantly impact grazing. The proposed 346-acre burning and seeding project could be completed to provide an additional 43 AUMs of livestock forage and to improve livestock distribution.	No change in livestock authorization would occur with this alternative. Restrictions on predator control would result in slightly increased costs of livestock management for two livestock permittees on sheep allotments. The proposed 346-acre burning and seeding that would produce 43 AUMs would not be allowed.
Impacts on Economic Conditions	Present economic conditions would not be affected. The length of oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 30 percent of the area. Annual local sales and Federal revenues related to livestock grazing could be reduced by $120 and $9 respectively as compared to the No Action/No Wilderness Alternative. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $36,878. Annual royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced but potential royalties of up to $100,000 per year from potential wells on 30 percent of the WSA would be foregone. Recreation-related local sales would be about the same as with the No Action/No Wilderness Alternative. Federal revenues from commercial recreation outfitting would probably increase if the area receives recognition from wilderness designation.	Present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1.0 percent (40 jobs) by the year 2010. There would be only minor changes in local economic conditions. Recreation-related local sales could contribute up to $17,835 annually to the local economy by the year 2020. The WSA could contribute up to $52,100 annually in local livestock and $4,011 in grazing fees. Oil and gas leasing fees and royalty payments could contribute from $122,860 to over $250,000 per year in Federal and State revenues. Federal revenues from commercial recreation outfitting (currently $50 annually) would continue.	Present economic conditions would not be affected. Employment for oil and gas exploration and development would be reduced by 30 jobs, 0.75 percnt of the projected Grand County employment in the year 2010, as compared to the No Action/No Wilderness Alternative. Annual local sales and Federal revenues related to livestock grazing could be reduced by $860 and $66 respectively as compared to the No Action/No Wilderness Alternative because proposed vegetation treatments would not be possible. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $115,640. Annual royalty payments on pre-FLPMA leases would not be reduced, but potential royalties of up to $100,000 per year from wells on 94 percent of the WSA would be foregone. Recreation-related local sales could contribute up to $17,835 annually to the local economy by the year 2020. Federal revenues from commercial recreation outfitting would probably increase if the area receives recognition from wilderness designation.

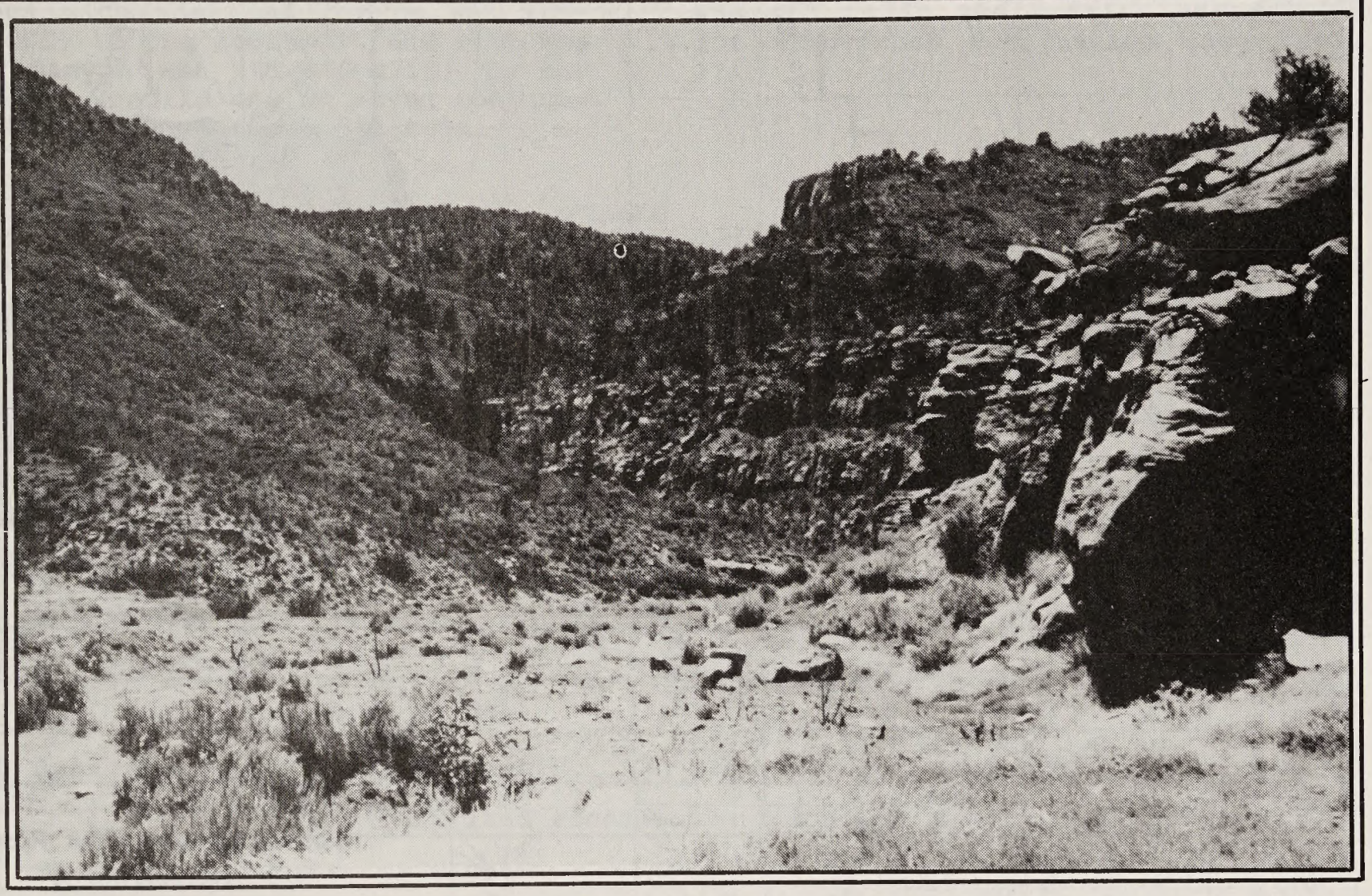
COAL CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 19 S., R. 21 E., Sec. 16	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Spruce Canyon WSA



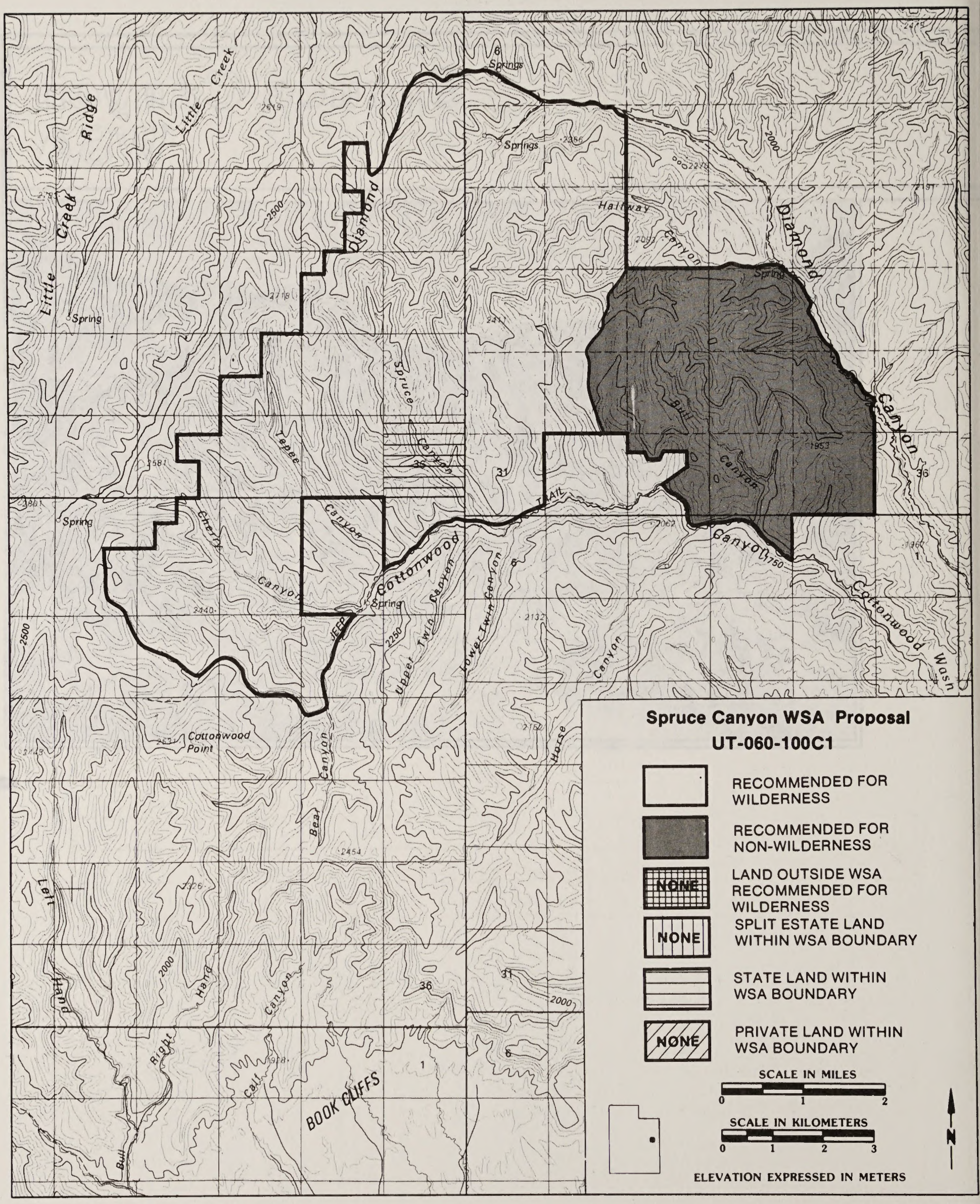
SPRUCE CANYON WSA

R. 21 E.

R. 22 E.

T. 18 S.

T. 19 S.



Spruce Canyon WSA Proposal
UT-060-100C1

RECOMMENDED FOR WILDERNESS

RECOMMENDED FOR NON-WILDERNESS

NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS

NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY

STATE LAND WITHIN WSA BOUNDARY

NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

N

ELEVATION EXPRESSED IN METERS

October 1991

SPRUCE CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 20,350 acres

The Spruce Canyon Wilderness Study Area (WSA) (UT-060-100C) is in Grand County, about 35 miles northeast of Green River, Utah (population 1,048). The study area is slightly crescent-shaped, extending about 5 miles from north to south and 9 miles from east to west. The WSA is contiguous with the Coal Canyon WSA (UT-060-100C) to the southwest and with the Flume Canyon WSA (UT-060-100B) to the northeast, and is one of seven contiguous WSAs in the Book Cliffs area.

Roads and State sections define the WSA on the north, east, and south; legal subdivisions, which delineate the southeastern corner of a large block of State land, form the western boundary (see Map). There are 20,350 acres of public land administered by the Bureau of Land Management (BLM) in the WSA. One State section (640 acres) is inheld within the WSA and is in the portion recommended for wilderness designation (see Table 1).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	20,350
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	640
Total	20,990
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	14,736
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	14,736
In-holdings (State, private)	640
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	5,614
Split-Estate	0
Total BLM land not recommended for wilderness	5,614
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

The study area is in the rugged terrain of the Book Cliffs and extends to the top of the Roan Cliffs. Several V-shaped canyons drain southward to Cottonwood Canyon, which is the southern boundary of the WSA. In the higher, northern portion of the WSA, a number of canyons that slope southeastward are the upper

portion of the Diamond Canyon drainage. Steep, narrow ridges divide the canyons. Elevations range from 5,500 feet in Cottonwood Canyon in the southwest tip of the WSA to 8,500 feet on Diamond Ridge in the northwest. More than 90 percent of the vegetation in the WSA is Douglas fir forest and pinyon-juniper woodland. The remainder of the area has riparian vegetation or sagebrush, depending on location along a stream or dry soils, respectively.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness where 14,736 acres would be designated as wilderness and 5,614 acres would be released for uses other than wilderness, which is the recommendation in this report; no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:

14,736 acres
(recommended for wilderness)
5,614 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 14,376 acres as wilderness and to release the remaining 5,614 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the area recommended for wilderness designation is in a natural condition and has outstanding opportunities for solitude and primitive recreation. Scenic, ecological, and wildlife values are exceptional. The area is contiguous to and would complement the management of a 48,000-acre tract of State land that is roadless.

Coal resources may exist in the western portion of the recommended area. Known coal resources are south of the WSA. If present, the coal is at considerable depth. If mining were to occur it would be in the long-term future after the more accessible coal in the region is mined. Because of these uncertainties, conflict with potential coal recovery does not outweigh the wilderness values in the recommended area. The potential for oil and gas deposits is also high in the recommended portion of the WSA, but the rugged terrain severely constrains access. Other locations in the vicinity, including the eastern part of the WSA, are more feasible for development.

Although the eastern part of the WSA, which is not recommended for wilderness designation, is in a natural condition and has outstanding opportunities for solitude and primitive recreation, it also has potential for economical recovery of oil and gas. The area is part of a known geologic structure and is relatively accessible. The oil and gas potential outweighs the importance of the wilderness values in the eastern part of the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The entire WSA meets the criteria for naturalness. Approximately 16,350 acres (80 percent of the WSA) are considered to be untouched. Grazing has taken place on ridges and in canyon bottoms but not on the steep side slopes. Mineral exploration has taken place in tributaries to Diamond and Cottonwood Canyons. These areas total about 4,000 acres (20 percent of the WSA).

The area generally appears to have been unaltered by man. Human imprints are not substantially noticeable within the WSA as a whole and will be restored by natural processes. Imprints include dry drill holes that affect a total of 10 acres and a vehicular way that extends into the WSA for about 1 mile in a side canyon off Diamond Canyon. There are no post-FLPMA imprints within the WSA.

B. Solitude

All in all, the entire WSA (20,350 acres) meets the requirements for outstanding opportunities for solitude. The large size and blocky configuration of the WSA contribute to a feeling of vastness, and the WSA's rugged terrain and isolation provide outstanding opportunities for the visitor to find solitude.

The rugged topography provides screening that obscures the sights and sounds of other visitors within the WSA. The vertical distance between the ridge tops and canyon bottoms (as much as 1,000 feet) provides opportunities for seclusion. These opportunities are more pronounced in the northwestern portion of the WSA.

The effectiveness of vegetation screening on steep slopes is diminished by the wide bands of rock exposures. In the higher elevations, Douglas fir forest is more dense, and enhances screening. Areas of mountain shrubs provide dense thickets but screening potential varies with overall height of the vegetation. Canyon bottoms covered with sagebrush generally do not provide screening from slopes and ridgetops above.

Sights and sounds from outside the WSA are temporary and include drilling along boundary roads, pipeline maintenance, and the use of mechanized equipment along the perimeter of the WSA.

The deeply incised, branching drainages within the WSA provide many travel routes that allow dispersion of recreational use.

C. Primitive and Unconfined Recreation

All in all, the entire WSA meets the requirements for outstanding opportunities for primitive and unconfined recreation.

Although lack of water in the interior of the WSA and the steepness and height of the slopes limits primitive recreation opportunities somewhat, the many drainages and the dissected terrain provide several potential hiking routes up canyon bottoms and along ridge tops. Opportunities for hiking, backpacking, and hunting are considered outstanding throughout the WSA. The Spruce Canyon WSA is between Coal and Flume Canyon WSAs. Logical travel routes include the various drainages at the northern end of the WSAs. A travel route exists from a road at the end of Sego Canyon along the Roan Cliffs all the way to Cottonwood Canyon, a straight line distance of about 9 miles. Primitive recreation opportunities are enhanced by combining the opportunities available in adjacent WSAs.

D. Special Features

The WSA is part of a critical watershed. The WSA is an integral part of the Book Cliffs ecosystem and links Coal Canyon and Flume Canyon WSAs.

Some erosional features of scenic interest within the WSA are pinnacles, balanced rocks, alcoves, overhangs, potholes, and arches.

Approximately 76 percent (15,500 acres) of the WSA is rated as outstanding for scenic quality.

The WSA has year-round populations of cougar, elk, and black bear, which are wildlife species associated with wilderness.

Black-footed ferrets, listed as an endangered species, and six other animal species and one plant species that are considered sensitive may inhabit or frequent the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. Forty-seven percent of the WSA is actually Douglas fir forest. The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (20,350 acres).

The PNV in the WSA is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah, standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within 5 hours drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,123,655
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,685,848

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,239,235
Provo-Orem, Utah	11	721,793	90	2,766,518

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Spruce Canyon WSA could contribute to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Spruce Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas. There are two designated wilderness areas within 100 miles of the WSA. To the south is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]) and to the east in Colorado is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness can be managed to preserve values now present in the area. Livestock grazing and maintenance of existing fences would continue but would not significantly affect wilderness values in the area. There are 2,132 acres of pre-FLPMA oil and gas leases in the WSA. About 1,612 acres of the leases are in the area recommended for wilderness.

Because of the oil and gas potential of the WSA, BLM projects that leases will be explored and may be developed in the recommended wilderness area following designation. However, because of the limitations of the terrain, it is expected that only about 34 acres will be disturbed. This would not affect the overall manageability of the area.

There are presently no mining claims in the recommended area, and the probability of future valid claims is low.

Provision of access to and activities on one section (640 acres) of State land in-held in the portion of the WSA recommended as wilderness could affect wilderness values and uses in the surrounding wilderness. BLM would be obligated to provide access to the State section and could not administratively control development on State land. However, the in-held section is on the extreme southern boundary of the recommended wilderness and therefore likely would not affect the overall manageability of the area.

The nonrecommended area also could be effectively managed as wilderness.

There are 520 acres of pre-FLPMA oil and gas leases in the nonrecommended area where the terrain is more accessible. BLM projects that up to 40 acres of the nonrecommended area would be disturbed by oil and gas activities following wilderness designation but this would not affect the over all manageability of the area.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Spruce Canyon WSA (USGS Bulletin 1753-A, Robert P. Dickerson, et al., 1990). The report indicates that no deposits of industrial minerals are known to be in the WSA. The WSA has a high resource potential for undiscovered deposits of coal and for undiscovered oil and gas. There is a moderate resource potential for tar sand in the northwestern parts of the WSA, and a low potential for tar sand and for resources of oil shale, gilsonite, uranium and other metals, and geothermal energy.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness designation, present economic conditions would not be affected. The length of oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 65 percent of the area.

Annual local sales and Federal revenues related to livestock grazing could be

reduced by $100 and $8 respectively as compared to the No Action/No Wilderness Alternative. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $11,228. Annual royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced, but potential royalties of up to $100,000 per year from wells on 65 percent of the WSA would be foregone. Recreation-related local sales would be about the same as with the No Action/No Wilderness Alternative because both motorized and primitive use would increase. Federal revenues from commercial recreation use would increase as this type of recreation use increases.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 70 inputs specifically addressing this WSA were received from 105 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 94 commenters supported wilderness designation for part or all of the WSA, while four commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values and lack of mineral-related conflict in the WSA. The majority of those commenting in favor of wilderness were almost equally from urban Utah and other states. Of particular concern was the need to protect wilderness values and wildlife habitat in the WSA. Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development and restrict livestock grazing management and public access. Most of those opposing wilderness designation were from rural Utah. No Federal agencies specifically commented on the Draft EIS for this WSA.

No comment letters were received on the Final EIS.

There is one State section (640 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation for the WSA. The State commented that the Spruce Canyon WSA has moderate wilderness values and moderate conflicts compared with the other WSAs in the region. According to the State, coal, oil and gas, and livestock conflicts are present. The State noted that wildlife values could be protected by designation of the area as an Area of Critical Environmental Concern, rather than as wilderness. The State questioned the relationship between the size of a potential oil and gas field and favorability; suggested that a better estimate of the size of the coal resource would be helpful; and requested information about the model used to predict the number of potential cultural resource sites in the WSA.

The Spruce Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Spruce Canyon WSA cannot be effectively managed as wilderness because of pre-FLPMA oil and gas leases. The Commission also noted that designation of the area as wilderness would be contrary to the County's overall planning goals and would create negative impacts on the economic future of Grand County.

SPRUCE CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (14,736 Acres)	No Action/No Wilderness	All Wilderness (20,350 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 72 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 579 acres because of mineral exploration and development, construction of access roads to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 4,130 acres. Almost all of the impact would be in the nondesignated area. Special features would not be significantly affected. Some Class A scenery would be reduced in quality in the disturbed and adjacent areas and some wilderness dependent species would temporarily leave the area. Vehicular use of new roads in the nondesignated portion would detract from opportunities for solitude and primitive recreation.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 713 acres because of vegetation treatments, oil and gas exploration and development construction of access to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 5,088 acres of the WSA. Special features would generally not be significantly affected. Some Class A scenery would be reduced in quality in disturbed and surrounding areas and some wilderness dependent wildlife species would leave the area during the period of disturbance. Vehicular use of 1 mile of way and up to 20 miles would detract from opportunities for solitude and primitive recreation.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 49 acres and indirectly reduced in quality on up to an additional 611 acres because of oil and gas exploration, development on pre-FLPMA leases, and construction of access to in-held State lands. Special features generally would be preserved, although some Class A scenery would be reduced in quality on the disturbed and surrounding areas.
Impacts on Vegetation	Approximately 2.9 percent (579 acres) of the vegetation in the WSA would be modified. Vegetation types and special status plant species would not be significantly modified with this alternative because the potential for major disturbance would be reduced on 65 percent (13,124 acres designated without pre-FLPMA leases) of the WSA. In addition, protective measures would be required on the remainder of the area.	Approximately 3.5 percent (713 acres) of the vegetation in the WSA would be modified with this alternative. The Category 2 candidate species that may be located in the WSA would not be significantly affected because protective measures would be required.	Vegetation types and special status plant species would be protected because potential surface disturbance would be reduced from 713 acres to 49 acres and the area would be closed to ORV use.

SPRUCE CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (14,736 Acres)	No Action/No Wilderness	All Wilderness (20,350 Acres)
Impacts on Mineral and Energy Exploration and Production	Partial wilderness designation would preclude or constrain potential exploration and development of an unknown portion of 10 to 50 million barrels of oil and 60 to 300 billion cubic-feet of natural gas that may occur in the WSA because only 35 percent of the WSA could be developed for oil and gas. Loss of exploration and development opportunities for other mineral and energy resources would not be significant because the probability of development is low even if a portion of the WSA is not designated wilderness.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims and mineral developments could occur without restriction for the protection of wilderness values.	The portion to the projected 10 to 50 million barrels of oil and 60 to 300 billion cubic feet of natural gas in the pre-FLPMA leases in the WSA could be produced. Recovery of an unknown but locally significant amount of oil and gas would be foregone because only 10 percent (2,132 acres) of the WSA could be developed for oil and gas.
Impacts on Wildlife Habitat and Populations	Wildlife would benefit from a reduced acreage of surface disturbance when compared to the No Action/No Wilderness Alternative. Only 2.9 percent (579 acres) of the habitat in the WSA would be disturbed. Approximately 500 acres of vegetation treatment would be allowed in the nondesignated portion, which would benefit some wildlife. Wildlife would not receive the additional benefit of solitude on the 5,614 acres not designated. Crucial deer and elk winter range would be disturbed. Special status species would not be significantly affected because protective measures and mitigation would be required.	Implementation of the land treatment would benefit some wildlife species and population levels by providing additional forage and ecotones. Surface disturbance on 3.5 percent (713 acres) of the habitat in the WSA may displace or reduce populations of some wildlife species during the lifetime of the projects. Crucial deer winter range would be disturbed. Special status species would not be significantly adversely affected because protective measures and mitigation would be required.	Only about 0.24 percent (49 acres) of the habitat in the WSA would be disturbed. Wilderness designation would preclude the proposed land treatment project which would have benefitted some wildlife species. Most wildlife species would benefit due to the preservation of solitude and crucial habitat. Special status species would be protected.

SPRUCE CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (14,736 Acres)	No Action/No Wilderness	All Wilderness (20,350 Acres)
	Alternatives		
Impacts on Livestock Management	Livestock management practices and grazing levels would not be significantly affected. Only 4 AUMs of potential forage would be foregone because vegetation treatment would not be allowed.	With this alternative, there would be no changes in livestock use or management techniques. Surface disturbances resulting from mineral exploration and development would reduce forage production by about four AUMs per year. This would not significantly impact grazing. The proposed 542-acre burning and seeding project could be completed to provide an additional 68 AUMs of livestock forage and to improve livestock distribution.	No change in livestock authorization would occur with this alternative. Restrictions on predator control would result in slightly increased costs of livestock management for one livestock permittee in a sheep allotment. The proposed 542-acre burning and seeding that would produce 68 AUMs would not be allowed.
Impacts on Local Economic Conditions	Present economic conditions would not be affected. The length of oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 65 percent of the area. Annual local sales and Federal revenues related to livestock grazing could be reduced by $100 and $8 respectively as compared to the No Action/No Wilderness Alternative. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $11,228. Annualy royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced, but potential royalties of up to $100,000 per year from wells on 65 percent of the WSA would be foregone. Recreation-related local sales would be about the same as with the No Action/No Wilderness Alternative because both motorized and primitive use would increase. Federal revenues from commercial recreation use would increase as this type of recreation use increases.	Present economic conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1.0 percent (40 jobs) by the year 2010. There would be only minor changes in local economic conditions. Recreation-related local sales could contribute up to $12,485 to the local economy by the year 2020. The WSA could contribute up to $12,400 annually in local livestock sales and $955 in grazing fees. Oil and gas leasing fees and royalty payments could contribute from $40,700 to over $250,000 per year in Federal and State revenues. Federal revenues from commercial recreation outfitting (currently $150 annually) would continue.	Present economic conditions would not be significantly affected. Employment for oil and gas exploration and development would be reduced by 30 jobs, 0.75 percent of the projected Grand County employment in the year 2010, as compared to the No Action/No Wilderness Alternative. Potential annual local sales and Federal revenues related to livestock grazing could be reduced by $1,360 and $105 respectively. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $36,436, and potential royalties of up to $100,000 per year from wells on 90 percent of the WSA would be foregone. Recreation-related local sales could contribute up to $12,485 annually to the local economy by the year 2020. Federal revenues from commercial recreation use would probably increase as this type of use increases.

SPRUCE CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 18 S., R. 21 E., Sec. 36	640.00		State	State	No	Exchange	$2,000	

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Flume Canyon WSA



R. 22 E.

R. 23 E.

T. 17 S.

T. 18 S.

FLUME CANYON WSA

Flume Canyon WSA Proposal
UT-060-100B

- RECOMMENDED FOR WILDERNESS
- RECOMMENDED FOR NON-WILDERNESS
- NONE — LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
- NONE — SPLIT ESTATE LAND WITHIN WSA BOUNDARY
- STATE LAND WITHIN WSA BOUNDARY
- NONE — PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

October 1991

FLUME CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 50,800 acres

The Flume Canyon Wilderness Study Area (WSA) (UT-060-100B) is in Grand County, about 43 miles northeast of Green River, Utah (population 1,048), and is contiguous with the Spruce Canyon WSA (UT-060-100C), to the southwest. The WSA is one of seven contiguous WSAs in the Book Cliffs. The study area is about 10 miles from north to south and 14 miles from east to west. Private and State land and the edge of the Book Cliffs form the southeastern boundary of the WSA and trails and scattered State lands form the western and northern boundaries.

The southwestern edge of the study area is at the bottom of Diamond Canyon. The western part of the WSA is adjacent to a block of State land which is roadless (see Map). There are 50,800 acres of public land administered by the Bureau of Land Management (BLM) in the WSA. Six State sections (3,812 acres) are in-held in the WSA; three of these (1,928 acres) are in the portion recommended for wilderness designation.

There are no private or split-estate in-holdings in the WSA (see Table 1).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	50,800
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	3,812
Total	54,612
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	16,495
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	16,495
In-holdings (State, private)	1,928
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	34,305
Split-Estate	0
Total BLM land not recommended for wilderness	34,305
In-holdings (State, Private)	1,884

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Westwater Point, a spur jutting almost due east from the crest of the Book Cliffs, is a divide in the central-western part of the WSA from which steep, narrow canyons radiate southward to Diamond Canyon; southeastward, to drain through alluvial fans at the base of the Book Cliffs, towards the Sulphur Creek drainage; and northeastward into the Westwater Creek drainage. Most of these drainages are ephemeral, and all are tributaries to the Colorado River, to the southeast. Flume Canyon slopes directly south into Diamond Canyon. Westwater Point is a narrow ridge that is nearly flat in the west and becomes more deeply dissected eastward. It terminates in the eastern half of the WSA

in a hilly benchland above the lower slopes of the Book Cliffs. Elevations range from 5,100 feet in Long Canyon, at the southern tip of the WSA, to 8,500 feet on Westwater Point. Vegetation is almost entirely pinyon-juniper, mixed with Douglas fir, aspen, and mountain shrub, and Douglas fir forest.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 16,495 acres would be designated as wilderness and 34,305 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:
16,495 acres
(recommended for wilderness)
34,305 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 16,495 acres as wilderness and to release the remaining 34,305 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the recommended area is in a natural condition and has outstanding opportunities for solitude and primitive recreation. Scenic, ecological, and wildlife aspects of the WSA are excellent. Oil and gas resources may exist in the area but the rugged terrain restricts access, and other locations in the vicinity, including the portion of the WSA that is not recommended, are considered more feasible for drilling. No significant conflicts exist with interests in other minerals or other land and resource uses. Wilderness values outweigh the importance of mineral values in this portion of the WSA when access factors are considered.

Although the southeastern two thirds of the WSA is also in a natural state and has outstanding opportunities for solitude and primitive recreation, there is potential for economic recovery of oil and gas. Portions of three known geologic structures are in the area and about 82 percent of the area is held by production on existing leases, although the producing wells are outside the WSA. The oil and gas potential outweighs the wilderness considerations in this portion of the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Overall, more than 99 percent (50,781 acres) of the WSA meets the wilderness criterion for naturalness. Much less than 1 percent (19 acres) of the WSA does not. As much as 50 percent (25,400 acres) of the WSA could be considered pristine. In most areas visitors would have the impression that the WSA has never been altered by man.

As a result of mapping errors made during the wilderness inventory, three ranch buildings, three corrals, a water impoundment, an irrigation ditch, several large water flumes, and several smaller structures currently in use near the Cottonwood Ranch were included in the Flume Canyon WSA. All of these structures were constructed prior to the passage of FLPMA. With the exception of the water flumes and irrigation ditch, which have pre-FLPMA rights-of-way, all of these structures were are in trespass on public land administered by BLM. The area disturbed by these structures totals approximately 19.3 acres. The three ranch buildings are on 6 acres in T. 19 S., R. 23 E., Sec. 7. The other structures are in the western portions of T. 19 S., R. 22 E., Secs. 6 and 7 and are within a discontinuous corridor, varying from 15 to 200 feet in width, that begins north of the ranch buildings and trends north-northwest for about 1.75 miles.

Other human imprints within the WSA are associated with grazing and mineral exploration, are not substantially noticeable within the WSA as a whole, and are

capable of being reclaimed naturally. These imprints include: (1) a vehicular way approximately 3 miles long to Westwater Point (pre-FLPMA); (2) approximately 4.5 miles of vehicular ways in Long Canyon; (3) an abandoned vehicular way approximately 1.5 miles long; (4) two abandoned drill pads that affect 5 acres each (pre-FLPMA); and (5) a rehabilitated road 3.5 miles long and a rehabilitated drill pad covering 5 acres. Overall, grazing has taken place on ridges and in canyon bottoms, but not on the steep side slopes. Approximately 25,000 acres have been grazed. Mineral exploration has occurred in side canyons off Diamond and Westwater Canyons involving approximately 800 acres.

B. Solitude

The entire WSA meets the criterion for outstanding solitude. It is possible to find secluded areas within the WSA because of the dissected terrain; isolation; areas of forest cover; many possible routes of travel; and the size of the unit.

The rugged terrain provides screening which obscures sights and sounds of others within the WSA. The vertical separation between ridgetops and canyon bottoms of as much as 1,000 feet enhances the ability to find seclusion. This characteristic is more pronounced in the northwestern portion of the WSA.

The effectiveness of vegetation screening is less on steep slopes because of wide bands of exposed rock. Douglas fir forest in the higher elevations is relatively dense and provides good screening. Areas of dense mountain shrub provide screening but effectiveness is largely a function of overall height. People on the canyon bottoms with sagebrush generally are noticeable from the slopes and ridgetops above.

Sights and sounds from outside the WSA primarily result from oil and gas exploration around the WSA perimeter. Roads, pipelines, drilling activities, and pumping facilities are a source of visual impact, noise, and dust. Views from the southeast part of the WSA include drilling activities in the Cisco Desert outside the WSA and Interstate Highway 70 (I-70). These are far enough from the WSA that they do not necessarily detract from solitude. Vistas to the southeast from high points would be adequate to give a visitor the feeling of vastness.

The deeply incised, branching drainages within the WSA provide many travel routes which allow dispersion of recreational use.

C. Primitive and Unconfined Recreation

Outstanding opportunities for primitive recreation are present throughout the WSA. The WSA provides opportunities for hunting, hiking, backpacking, camping, and rock scrambling. The many drainages and the dissected terrain provide numerous potential hiking routes up canyon bottoms and along ridgetops. Steepness and the height of side slopes limit potential hiking routes into and out of canyons, but increase the challenge.

D. Special Features

Rock formations and color contrasts provide scenic value. Erosional features of scenic interest within the WSA include pinnacles, balanced rocks, alcoves, overhangs, potholes, and arches.

The WSA provides habitat for animals that avoid areas of human occupation and has year-round populations of cougars, elk, and black bear, which are wildlife species associated with wilderness. Black-footed ferrets, listed as endangered species, and six other animal species considered sensitive may also occur in the WSA. One plant species that is considered sensitive may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Colorado Plateau Province/Ecoregion and the Rocky Mountain Forest Province/Ecoregion.

The PNV in the WSA is juniper-pinyon woodland (41,110 acres) and mountain mahogany-oak scrub (9,690 acres). The juniper-pinyon woodland PNV type is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah, but the mountain mahogany-oak scrub type is not represented at all in the NWPS. Its only representation is in 4 other WSAs, all in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and the Provo-Orem, Utah, standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,123,450
Mountain Mahogany-Oak Scrub	0	0	4	27,016
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,685,643
Mountain Mahogany-Oak Scrub	0	0	4	27,016

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,208,875
Provo-Orem, Utah	11	721,793	90	2,736,068

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Flume Canyon WSA could contribute to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Flume Canyon Wilderness would supplement the NWPS in the Uinta Basin Section of the Colorado Plateau where there are no established wilderness areas. There are two designated wilderness areas within 100 miles of the WSA. To the south is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]) and to the east in Colorado is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The portion of the WSA that is recommended for wilderness can be managed to preserve values now present in the area. Livestock grazing and maintenance of existing fences would continue but would not significantly affect wilderness val-

ues in the area. There are 360 acres of pre-FLPMA and 695 acres of post-FLPMA oil and gas leases in the WSA. About 20 acres of the pre-FLPMA and 160 acres of the post-FLPMA leases are in the area recommended for wilderness. Because of the oil and gas potential of the WSA BLM projects that leases will be explored and may be developed in the recommended wilderness following designation. However, because of the limitations of the terrain and the small acreage under lease, it is expected that only about 7 acres of the recommended area will be disturbed. This would not affect the overall manageability of the area. There are presently no mining claims in the recommended area, and the probability of future valid claims is low.

Provision of access to and activities on three sections (1,928 acres) of in-held State land centrally located in the portion of the WSA recommended as wilderness could affect wilderness values and uses in the surrounding wilderness. BLM would be obligated to provide access to the State sections and could not administratively control development on State land. Because of the rugged terrain in the recommended area oil and gas activities on State land may be restricted.

It would be more difficult to manage the area nonrecommended area for its wilderness values. There are 340 acres of pre-FLPMA, 535 acres of post-FLPMA oil and gas leases and three in-held State sections in this area where the terrain is more accessible. BLM projects that up to 19 acres of the nonrecommended area would be disturbed by oil and gas activities, including 8 miles of new road, following wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Flume Canyon WSA (USGS Bulletin 1753-A, Robert P. Dickerson, et al., 1990). The report indicates that there is a moderate resource potential for tar sand in the northwestern part of the WSA, and a low potential for tar sand and for resources of oil shale, gilsonite, uranium and other metals, and geothermal energy. The WSA has a high resource potential for undiscovered deposits of coal and for undiscovered oil and gas. There are no known deposits of industrial minerals in the WSA.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness designation, present economic trends and conditions would not be significantly affected. The length of future oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 32 percent of the area. Livestock sales and grazing fees would not be affected. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $3,350. Annual royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced, but potential royalties of up to $100,000 per year from wells on 32 percent of the WSA would be foregone. Recreation-related local sales could contribute up to $12,485 annually to the local economy by the year 2020. Federal revenues from commercial recreation fees (currently $150 annually) would continue and probably increase.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 106 inputs specifically addressing this WSA were received from 107 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 95 commenters supported wilderness designation for part or all of the WSA, while five commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the wilderness values and opportunities in the WSA and stated that there are not or should not be any conflicts with mineral interests. The majority of those commenting in favor of wilderness were about equally from other states and urban Utah. Of particular concern was the need to protect wildlife and wildlife habitat and wilderness values in the WSA and complement wilderness management of nearby areas.

Those opposing wilderness were concerned that wilderness would prohibit mineral exploration and development and restrict livestock grazing management and public access. Most of those opposing wilderness designation were from rural Utah.

No Federal agencies commented on the Draft EIS for this WSA or expressed an opinion regarding wilderness designation.

No comment letters were received on the Final EIS.

There are six State sections (3,811.8 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation for the WSA. The State commented that the Flume Canyon WSA has moderate wilderness values and moderate conflicts compared with the other WSAs in the region. According to the State, there are conflicts with moderate levels of oil and gas, coal resources, and livestock interests. The State also noted that parts of the WSA along with the adjacent Spruce and Coal Canyon WSAs could be considered for Areas of Critical Environmental Concern to protect wildlife if the WSA is not designated wilderness. In commenting on the Draft EIS, the State said that the information about oil shale and tar sand should be more detailed, that geologic structure has little effect on oil shale deposits; and that metalliferous black shales like the Mancos Shale, are being researched as a potentially significant source of metals.

The Flume Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Flume Canyon WSA cannot be effectively managed as wilderness because of in-held and adjacent State lands, and pre-FLPMA oil and gas leases. The Commission also noted that designation of the area as wilderness would be contrary to the County's overall planning goals and that the geology and ecology of the area is repetitious of the adjacent State roadless area and tribal lands that are managed as roadless.

FLUME CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (16,495 Acres)	No Action/No Wilderness	All Wilderness (50,800 Acres)
Impacts on Wilderness Values	Wilderness values would be preserved overall in the designated area which is approximately 32 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 124 acres because of oil and gas exploration and development, construction of access roads to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to 6,096 acres. Almost all of the impact would be in the nondesignated area. Special features would generally not be significantly affected. Some wilderness dependent species would temporarily leave the area. Vehicular use of 4.5 miles of ways and up to 14 miles of new roads in the nondesignated area would detract from opportunities for solitude and primitive recreation.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 184 acres because of oil and gas exploration and development, construction of access to in-held State lands, and watershed projects. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 7,620 acres of the WSA. Special features would generally not be significantly affected. Some wilderness dependent wildlife species would leave the area during the period of disturbance. Vehicular use of 6 miles of way and up to 41 miles would detract from opportunities for solitude and primitive recreation.	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 34 acres and indirectly reduced in quality on up to an additional 1,524 acres because of construction of access to in-held State lands, oil and gas exploration and development on pre-FLPMA leases and watershed projects. Special features generally would be preserved overall.
Impacts on Vegetation	Approximately 0.2 percent (124 acres) of the vegetation in the WSA would be modified. Vegetation types and special status plant species would not be significantly modified with this alternative because the potential for major disturbance would be reduced on 32 percent of the WSA. In addition, protective measures would be required on the remainder of the area.	Approximately 0.4 percent (184 acres) of the vegetation in the WSA would be modified with this alternative. The Category 2 candidate species that may be located in the WSA would not be significantly affected because protective measures would be required.	Vegetation types and special status plant species would be protected because potential surface disturbance would be reduced from 184 acres to 34 acres and the area would be closed to ORV use.

FLUME CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

	Alternatives		
Issue Topic	Recommendation Partial Wilderness (16,495 Acres)	No Action/No Wilderness	All Wilderness (50,800 Acres)
Impacts on Mineral and Energy Exploration and Production	Partial wilderness designation would preclude or constrain potential exploration and development of an unknown portion of 10 to 50 million barrels of oil and 60 to 300 billion cubic-feet of natural gas that may occur in the WSA because only 68 percent of the WSA could be developed for oil and gas. Loss of exploration and development opportunities for other mineral and energy resources would not be significant because the probability of development is low even if a portion of the WSA is not designated wilderness.	Implementation of this alternative would not adversely affect mineral exploration or production because mineral leasing, location of mining claims and mineral developments could occur without restriction for the protection of wilderness values.	The portion to the projected 10 to 50 million barrels of oil and 60 to 300 billion cubic feet of natural gas in the pre-FLPMA leases in the WSA could be produced. Recovery of an unknown but locally significant amount of oil and gas would be foregone because only 1.4 percent (695 acres) of the WSA could be developed for oil and gas.
Impacts on Wildlife Habitat and Populations	Wildlife would benefit from a reduced acreage of surface disturbance when compared to the No Action/No Wilderness Alternative. Only 0.2 percent (124 acres) of the habitat in the WSA would be disturbed. Wildlife would not receive the additional benefit of solitude on the 34,305 acres not designated. Crucial deer winter range would be disturbed. Special status species would not be significantly affected because protective measures and mitigation would be required.	Surface disturbance on 0.4 percent (184 acres) of the habitat in the WSA may displace or reduce populations of some wildlife species during the lifetime of the projects. Crucial deer winter range would be disturbed. Special status species would not be significantly adversely affected because protective measures and mitigation would be required.	Only about 0.07 percent (34 acres) of the habitat in the WSA would be disturbed. Most wildlife species would benefit due to the preservation of solitude and crucial habitat. Special status species would be protected.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (16,495 Acres)	No Action/No Wilderness	All Wilderness (50,800 Acres)
Impacts on Livestock Management	Livestock management practices and grazing levels would not be significantly affected.	With this alternative, there would be no changes in livestock use or management techniques. Surface disturbances resulting from mineral exploration and development would reduce forage production by about 7 AUMs per year. This would not significantly impact grazing.	No change in livestock authorization would occur with this alternative. Restrictions on predator control would result in slightly increased costs of livestock management for two livestock permittees in two sheep allotments.
Impacts on Economic Conditions	Present economic trends and conditions would not be significantly affected. The length of oil and gas employment in the WSA would be reduced because oil and gas could not be developed on 32 percent of the area. Livestock sales and grazing fees would not be affected. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $3,350. Annual royalty payments from leases in the nondesignated area and on pre-FLPMA leases in the designated area would not be reduced, but potential royalties of up to $100,000 per year from wells on 32 percent of the WSA would be foregone. Recreation-related local sales could contribute up to $12,485 annually to the local economy by the year 2020. Federal revenues from commercial recreation fees (currently $150 annually) would continue and probably increase.	Present economic trends and conditions would not be affected. Oil and gas exploration and development would increase employment in Grand County by 1.0 percent (40 jobs) by the year 2010. There would be only minor changes in local economic conditions. Recreation-related local sales could contribute up to $12,485 annually to the local economy by the year 2020. The WSA could contribute up to $38,080 annually in local livestock sales and $2,933 in grazing fees. Oil and gas leasing fees and royalty payments could contribute from $101,600 to over $250,000 per year in Federal and State revenues. Federal revenues (currently $150 per year) from commercial recreation use would continue.	Present economic trends and conditions would not be significantly affected. Employment for oil and gas exploration and development would be reduced by 30 jobs, 0.75 percent of the projected Grand County employment in the year 2010, as compared to the No Action/No Wilderness Alternative. Potential annual local sales and revenues related to livestock grazing would continue at $30,080 and $2,933 respectively. Potential annual Federal and State revenues from oil and gas leasing fees could be reduced by $99,490 and potential royalties of up to $100,000 per year from wells on 99 percent of the WSA would be foregone. Recreation-related local sales could contribute up to $12,485 annually to the local economy by the year 2020. Federal revenues from commercial recreation fees (currently $150 annually) would continue and probably increase.

FLUME CANYON WILDERNESS STUDY AREA

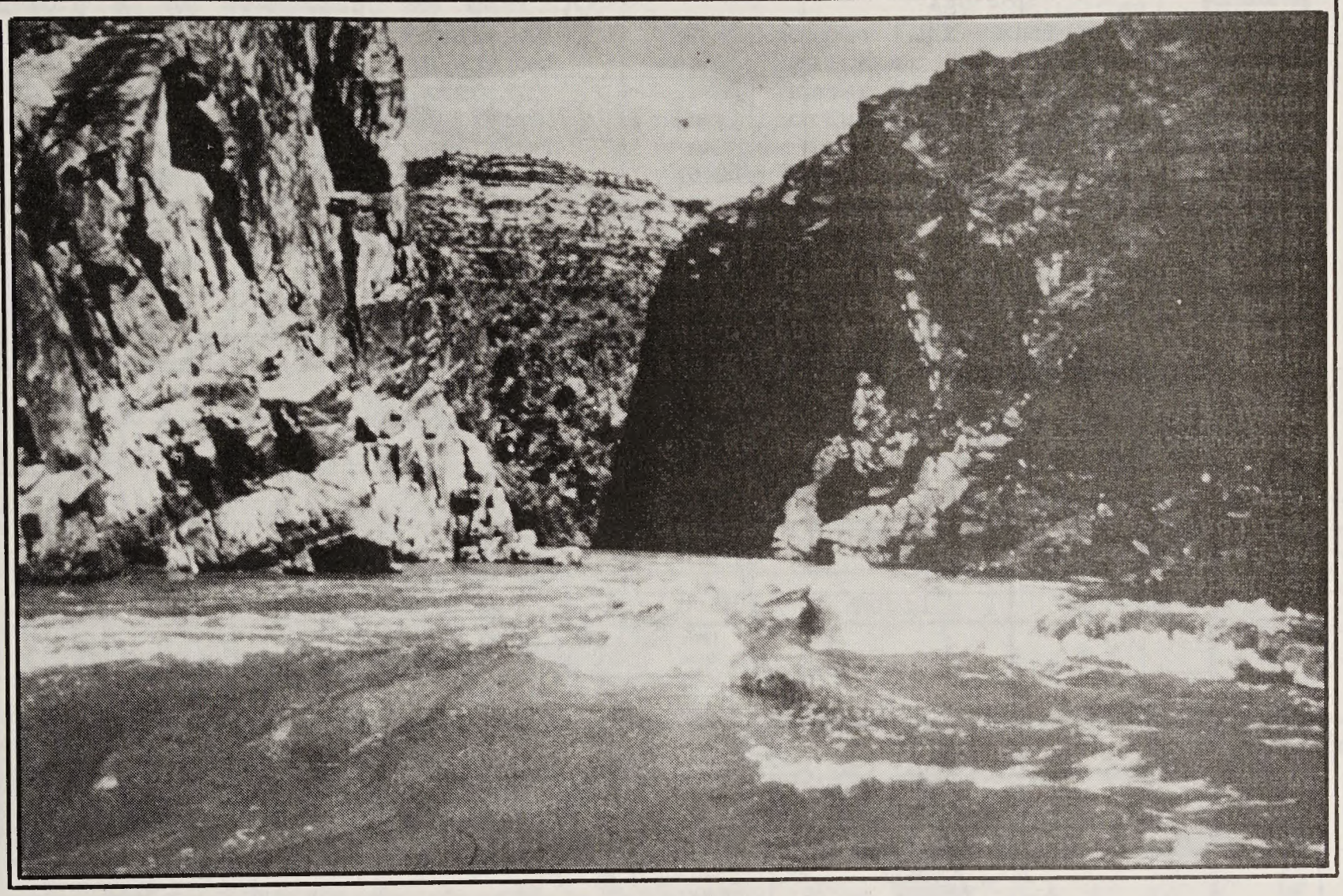
Appendix

Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

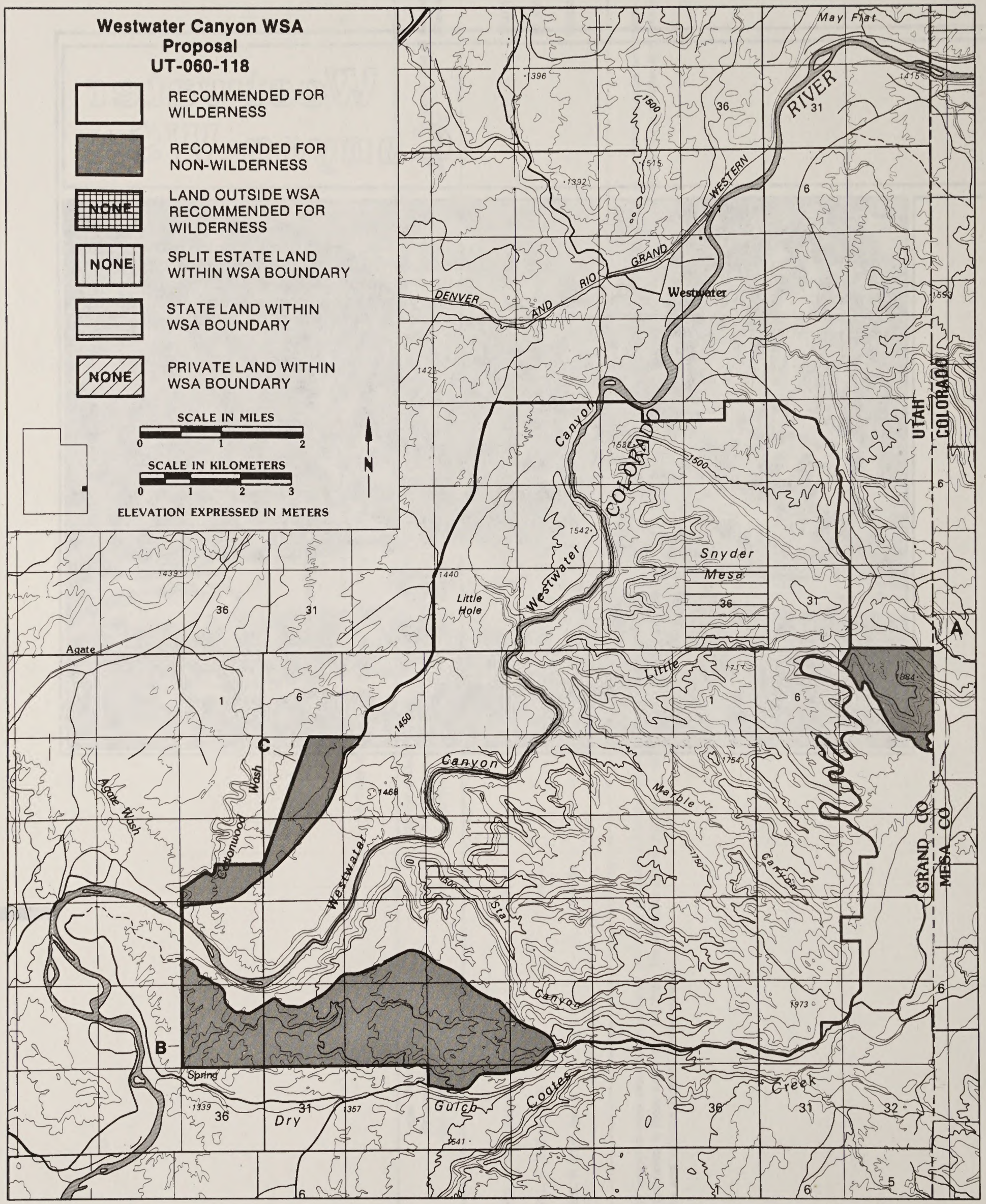
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 17 S., R. 22 E., Sec. 32	640.00		State	State	No	Exchange		$2,000
T. 17 S., R. 22 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 18 S., R. 22 E., Sec. 2	647.64		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Westwater Canyon WSA



WESTWATER CANYON WSA



October 1991

WESTWATER CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 31,160 acres

The Westwater Canyon Wilderness Study Area (WSA) (UT-060-118) is in Grand County, about 25 miles west of Grand Junction, Colorado (population 20,170) and 30 miles northeast of Moab, Utah (population 5,333). The study area extends about 8 miles from north to south and 8 miles from east to west. Although it is only 7 miles southeast of Interstate Highway 70 (I-70), the WSA is difficult to reach. The WSA is named for Westwater Canyon on the Colorado River, which flows through the study area from north to southwest. About 1.5 miles of the eastern boundary is on the Utah-Colorado state line.

The boundaries of the WSA are along roads and the edges of non-Federal lands (see Map). The WSA contains 31,160 acres of public land administered by the Bureau of Land Management. Two State sections (1,120 acres) are inheld within the WSA and are in the portion of the WSA recommended for wilderness designation (see Table 1).

The principle feature of the WSA is the scenic Westwater Canyon of the Colorado River, famous for whitewater river running opportunities. Westwater Canyon is a narrow inner gorge cut through dense, dark crystalline rocks, and an enclosing, wider canyon 600 feet deep, with sheer red walls.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	31,160
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,120
Total	32,280
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	26,000
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	26,000
In-holdings (State, private)	1,120
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	5,160
Split-Estate	0
Total BLM land not recommended for wilderness	5,160
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

Above the canyons are tablelands, dissected by deep tributary canyons that drain into the Colorado River. Elevations range from 4,100 feet on the Colorado River, at the southwestern edge of the WSA, to 6,500 feet in the northwestern part of the WSA. Pinyon-juniper woodland is the dominant vegetation in about half of the WSA; juniper and sagebrush, pinyon-juniper with blackbrush, and sagebrush cover the remainder of the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative, where 26,000 acres would be designated as wilderness and 5,160 acres would be released for uses other than wilderness, which is the recommendation in this report; a no action (no wilderness) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:

26,000 acres
(recommended for wilderness)
5,160 acres
(not recommended for wilderness)

The recommendation for this WSA is to designate 26,000 acres as wilderness and to release the remaining 5,160 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all in-holdings and provides additional information on acquisition.

All of the recommended portion is in a natural condition, 79 percent of the area has outstanding opportunities for solitude, and 30 percent has outstanding opportunities for primitive recreation. The river corridor, with river running and related camping and hiking, is the main recreational attraction.

Potential mineral conflicts would concern placer gold mining, but large quantities of placer gold are unlikely in the WSA as only small amounts of potentially gold-bearing gravel are present. No significant conflicts exist with other mineral-related interests or other uses of land and resources.

Water flows in the Colorado River are influenced by upstream and downstream use requirements under terms of the Colorado River Compact. Downstream obligations are sufficient to assure that flows through the Westwater segment of the river would be sufficient to maintain wilderness values. A Federal reserved water right would therefore not be necessary.

All of the portion of the WSA that is not recommended for wilderness designation is natural but lacks outstanding opportunities for solitude and primitive recreation. The nonrecommended area (Areas A, B and C) are not recommended for wilderness designation because they have less than outstanding wilderness characteristics. Area A forms a small peninsula that is nearly isolated from the remainder of the study area by roads that lead to private land on the north and a large chained area to the south. Area B is nearly separated from the remainder of the study area by a 7-mile-long, constructed but not maintained, vehicle route that would serve as a more identifiable boundary than the legal subdivision boundary located to the south. Area C is a relatively flat, open area that does not add appreciably to the wilderness values of the WSA.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. The entire WSA meets the standard for naturalness and

the area generally appears to be unaltered by man. Imprints total less than 50 acres. These imprints, both pre-FLPMA and post-FLPMA, are not substantially noticeable within the unit as a whole.

The area generally appears to be unaltered by man except for the following pre-FLPMA imprints: (1) a vehicle way 7 miles long, constructed but not maintained, south of the Colorado River and west of Star Canyon; (2) a vehicle way less than 1 mile long that runs through a post-FLPMA exclosure on the south edge of the Colorado River at the west end of the WSA; (3) a vehicle way about 3 miles long, not maintained and presently revegetating, that runs west of Picture Gallery Ranch for about 3 miles; (4) a vehicle way about 2 miles long, recently used for access to placer claims but presently revegetating, which crosses a sandy area to Miner's Cabin; (5) a vehicle way 2 miles long, with some revegetation, to Little Hole; (6) a vehicle way 2 miles long, to the canyon rim south of Little Hole; (7) a vehicle way 1 mile long, presently revegetating, to the north end of Big Hole; (8) a vehicle way 4 miles long, showing some revegetation, that crosses slickrock and sands from the WSA's northwest boundary road, with a 0.5-mile unconstructed spur vehicle way leading south to the canyon rim; (9) a 15-foot square fence exclosure near the head of Big Hole, covering less than one acre; (10) an 8-foot square fenced exclosure near the western boundary of the WSA south of the Colorado River, covering less than 1 acre; (11) Miner's Cabin, a historic site at the north end of the WSA near the river, covering less than 1 acre; (12) evidence of historic placer claims, consisting of old equipment and rubble, covering about 5 acres in the vicinity of Miner's Cabin; (13) Outlaw Cave, a historic site on the Colorado River covering less than 1 acre; and (14) three livestock reservoirs covering less than 1 acre.

Since establishment of the WSA, two activities have occurred within the WSA, which affected naturalness: (1) a 20-acre wildlife habitat exclosure fence for riparian studies was constructed by BLM in May, 1982 on the south side of the Colorado River near the western boundary of the WSA; and (2) a small amount of pick and shovel work was completed on a placer gold claim in the northeastern portion of the WSA. The work was examined and there was not enough surface disturbance to warrant a reclamation plan. The claims are still considered active.

B. Solitude

About 20,600 acres (66 percent) of the WSA have opportunities for solitude that meet the outstanding criterion for lands under wilderness review. The remainder of the WSA, about 10,560 acres (34 percent), does not meet the criterion to be considered outstanding.

The size and configuration of the WSA can give visitors a feeling of vastness. The terrain also provides solitude by screening, which is excellent within the several canyon systems and in Big Hole. Within the canyons, parties traveling in opposite directions might encounter sights or sounds of one another, but the diversity of travel routes into side canyons or alcoves tend to dissipate encounters. Closely-spaced parties, boating or camping on the Colorado River, tend to be aware of each other, but the winding nature of Westwater Canyon and the rapids tend to reduce contacts while floating the river. Downstream, parties are more likely to be aware of each other because of the longer lines of sight as the river broadens. Topographic screening is less pronounced north of the river and along the southwestern boundary.

Screening by vegetation alone does not provide significant solitude within the WSA, but it augments terrain in some areas. Much of the WSA is rock outcrop or has sparse pinyon-juniper vegetation. In riparian areas or on ridge top areas that have dense pinyon-juniper woodland screening potential is greater. Vegetation and terrain provide sufficient screening on most of the WSA to give visitors opportunities for seclusion.

Screening is insufficient to provide seclusion on 10,560 acres or 34 percent of the WSA in the following areas: (1) the 6,200-acre area north of the Colorado River Canyon rim; (2) the 3,700-acre area south of the canyon rim and west of Star Canyon; (3) the 160-acre flats near Picture Gallery Ranch; and

(4) the 500-acre area southeast of Snyder Mesa near the Colorado state line.

The heavy recreation use in Westwater Canyon during the river-running season detracts from the feeling of seclusion. Campsites are assigned. Near maximum allowed use occurs throughout the summer season. Crowding increases at times of high water, when some of the available campsites are flooded. The Little Dolores, Star, and Marble side canyons provide limited dispersion opportunities to alleviate crowding along the river corridor. The number of permits issued by BLM could be reduced to improve solitude if necessary.

The WSA is remote, with few significant human intrusions nearby. Irrigated fields can be seen from several points along the edge of the WSA, but they are not significant visual intrusions. Solitude in portions of the WSA near Picture Gallery, Wild Ass, Westwater, Rose, and Shield ranches could be adversely affected by sights and sounds of ranch activities. A railroad about 1 mile north of the WSA could affect solitude along the northern boundary of the WSA. The railroad is visible from a few points on the northern side of the WSA. I-70 can be seen from a few places in the north end of the WSA, but the highway is about 4 miles away and does not significantly limit solitude in the WSA.

Views from the WSA of distant scenic areas are possible, but most recreational use is in canyons where views are confined. Probable vistas from high points such as the north rim of the Colorado River Canyon or Snyder Mesa would include the Uncompahgre Uplift (in Colorado) to the east, Book Cliffs to the north, and the La Sal Mountains to the southwest.

C. Primitive and Unconfined Recreation

Approximately 7,760 acres, 25 percent of the WSA, meet the requirement for outstanding opportunities for primitive and unconfined recreation, whereas these standards are not met on 23,400 acres, or 75 percent of the WSA.

Opportunities for primitive and unconfined recreation are outstanding within parts of the WSA, primarily because of the whitewater river running potential and related camping and hiking activities. Outstanding opportunities for challenging hiking, rock scrambling, and primitive camping also exist in side canyons, where the sheer cliffs and dissected terrain allow numerous alternate hiking routes.

Opportunities for primitive recreation are not outstanding in about 6,200 acres north of the Colorado River Canyon rim; on 3,700 acres south of the canyon rim and west of Star Canyon; on 3,800 acres in the vicinity of Snyder Mesa; nor on 9,700 acres on the mesa tops between Star and Marble Canyons and the flat areas near ranches.

D. Special Features

The Colorado River through Westwater Canyon has been studied and recommended for inclusion in the Wild and Scenic Rivers System as a wild river. Westwater Canyon has high scenic quality and unique geologic features. Two prominent geologic features are found in the WSA: a black pre-Cambrian gneissic rock and a large fault across the head of Westwater Canyon. Similar exposure of pre-Cambrian rock is found along the Colorado River only within the Grand Canyon and at small outcroppings just above Westwater Canyon. The WSA has archaeological and historical sites that are considered special features.

Approximately 80 percent (24,928 acres) of the WSA is rated as outstanding for scenic quality.

The WSA has year-round populations of cougar and desert bighorn sheep, which are wildlife species associated with wilderness. Six animal species (black-footed ferret, peregrine falcon, bald eagle, Colorado squawfish, humpback chub, and bonytail chub) which are listed as endangered occur, or may occur, in the WSA. Eight animal species and one plant species that are considered sensitive also occur, or may occur, in the WSA. One of these Federally listed sensitive species, the razorback sucker, has been designated as endangered in Utah by the Utah Division of Wildlife Resources.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (21,812 acres) and saltbush-greasewood (9,348 acres). Both PNV types are represented in the NWPS and in other BLM study areas. The saltbush-greasewood PNV is represented in the NWPS only in Utah, however. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (Five Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and the Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,122,193
Saltbush-Greasewood	1	20,000	17	384,655
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,684,386
Saltbush-Greasewood	1	20,000	17	384,655

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,228,515
Provo-Orem, Utah	11	721,793	90	2,755,708

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Westwater Canyon WSA could contribute to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and in Colorado, the adjacent state nearest the WSA.

A Westwater Canyon Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wilderness areas, totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the south, is the 45,000-acre Dark Canyon Wilderness (U.S. Forest Service [FS]), and to the southeast, in Colorado, is the 11,180-acre Black Canyon of the Gunnison Wilderness (National Park Service [NPS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA, including the portion recommended for wilderness designation could be effectively managed to protect the wilderness values now in the area. Livestock grazing and maintenance of fences and three livestock reservoirs would continue in the WSA but would not significantly affect the wilderness values of the area.

There are no mineral leases in the area, and new leases would not be issued. There are 260 acres of mining claims in the recommended portion of the WSA. There is some potential for small placer gold deposits in the WSA, but it is expected that only a small portion of these and future claims existing at the time of designation would be valid and would be explored and possibly developed. Any disturbance from placer gold activities is expected to be small and would not affect the overall manageability of the area.

There are two in-held State sections (1,120 acres) in the recommended part of the study area that could create additional manageability problems because BLM would be required to provide reasonable access to State land and would have no control over activities on State land. However, the potential for development and the need for access to the State in-holdings is low.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the Westwater Canyon WSA (USGS Bulletin 1736-C, Robert P. Dickerson et al., 1988). The report indicates that subeconomic placer gold deposits were identified at existing mining claims in the WSA. The mineral resource potential is high for placer gold adjacent to the Colorado River and in terrace deposits above it. The resource potential is moderate in the southern part of the WSA for gold, silver, copper, and barite in veins. No resource potential for uranium in the Morrison Formation, which is uranium-bearing elsewhere in the vicinity, exists in the WSA because the formation has been eroded away. The resource potential is low for gold, silver, mercury, copper, and uranium in the Chinle Formation, and for chromium, nickel, and cobalt resources in Precambrian rocks. Geological, geochemical, and geophysical studies indicate a low energy resource potential for undiscovered oil, natural gas, carbon dioxide, and geothermal energy. There is no resource potential for coal.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

With BLM's recommended partial wilderness designation, present economic trends and conditions would not be significantly affected. Recreation-related sales, including commercial river-based recreation, could contribute up to $1,510,824 annually to the local economy by the year 2020. The WSA could contribute up to $12,100 annually in local livestock sales and $932 in Federal and State oil and gas leasing revenues of up to $50,498 per year could be foregone. Recreational river use would continue to

provide about $32,217 in Federal revenues annually.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 48 inputs specifically addressing this WSA were received from 51 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 41 commenters supported wilderness designation for part or all of the WSA, while three commenters were opposed. Seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the special features and opportunities for primitive recreation in the WSA. The majority of those commenting in favor of wilderness were from urban Utah and outside the state.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development, restrict public access, and conflict with motorized recreation. Most of those opposing wilderness designation were from rural Utah.

Two Federal agencies, the USBM and NPS, commented on the Draft EIS for this WSA but expressed no opinion on wilderness designation. The USBM commented that the petroleum potential of the WSA has not been tested and should be characterized as "unexplored at depth" rather than unfavorable. The NPS suggested that BLM address the Westwater fossil site as a potential national natural landmark.

No comment letters were received on the Final EIS.

There are two State sections (1,120 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation for the WSA. The State commented that the Westwater Canyon WSA has some of the best wilderness values in the region and a low degree of conflict. The State noted that the recreational values of the Colorado River have long been recognized and provide an economic contribution to the river running industry. According to the State, conflicts are minor for all mineral values but there is potential for hydroelectric development on the Colorado River. The State also noted that hydroelectric development would be in high conflict with the established recreational industry on the river and with endangered species habitat. The State further pointed out a map discrepancy, questioned the analysis of cultural resources and suggested that uranium/vanadium and copper-bearing formations needed further investigation.

The Westwater Canyon WSA is in Grand County. The Grand County Master Plan does not specifically address the WSA. The plan generally emphasizes continuation of present uses and maximizing mineral development. The Grand County Commission is opposed to wilderness designation and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission stated that the Westwater Canyon WSA can be effectively managed according to the BLM Grand Resource Management Plan (RMP) to protect important resource values while allowing legitimate resource uses. The Commission pointed out that the RMP already includes vehicle closures, restrictions on oil and gas leasing, and mining claim withdrawals. The Commission has endorsed designation of the Colorado River through Westwater Canyon as a recreational river.

WESTWATER CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation Partial Wilderness (26,000 Acres)	No Action/No Wilderness	All Wilderness (31,160 Acres)
	Alternatives		
Impacts on Wilderness Values	Wilderness values would be preserved in the designated area which is approximately 83 percent of the WSA. Naturalness and opportunities for solitude and primitive recreation would be directly lost on 500 acres and indirectly and temporarily reduced in quality on up to 1,246 acres. All of the impact would be in the nondesignated area. Special features would be preserved with the exception of 50 acres of Class A scenery that would be burned and reseeded.	Wilderness values would not be protected by wilderness designation, loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on about 500 acres and indirectly and temporarily reduced in quality on up to 1,246 acres of the WSA due to a prescribed burning and seeding project. Most special features (with the exception of 50 acres of Class A scenery which would be disturbed) would not be significantly affected. Continued vehicular use of 20.5 miles of ways would detract from opportunities for solitude and primitive recreation.	Wilderness designation would preserve the wilderness values in the WSA because surface disturbing activities would not occur following wilderness designation.

WESTWATER CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (26,000 Acres)	No Action/No Wilderness	All Wilderness (31,160 Acres)
Impacts on Vegetation	Impacts would be about the same as with the No Action/No Wilderness Alternative because approximately 500 acres of prescribed burn and seeding would be allowed. About 1.6 percent of the vegetation in the WSA would be altered under this alternative.	Vegetation would be altered on 1.6 percent of the WSA because this alternative would allow 500 acres of prescribed burn and seeding. This would change pinyon and juniper woodland and sagebrush vegetation into grass-shrub vegetation. Threatened and endangered or other special status plant species would not be significantly affected because only one endemic plant species is known to grow in the WSA and protective measures would be required.	Vegetation types and special status plant species would be protected and preserved because no surface-disturbance is projected following wilderness designation.
Impacts on Wildlife Habitat and Populations	Implementation of the 500-acre burning and seeding project would disturb 1.6 percent of the wildlife habitat in the WSA. Some wildlife species would benefit from additional forage and ecotones. Vegetation types and special status species would receive additional protection on 83 percent of the WSA.	Burning and seeding would disturb 1.6 percent (500 acres) of wildlife habitat in the WSA. Implementation of the 500-acre land burning and seeding project would benefit some wildlife species and population levels by providing additional forage and ecotones. Endangered, threatened, or other special status animal species would not be significantly affected because they generally are not found in the area that would be burned, and protective measures would be required.	None of the wildlife habitat in the WSA would be disturbed. Wilderness designation would preclude the proposed burning and seeding project and the potential wildlife benefits from additional forage and ecotones would be foregone. Most wildlife species would benefit from provision of solitude and elimination of ORV use and surface-disturbance. Threatened, endangered and other special status species would be preserved.

WESTWATER CANYON WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Partial Wilderness (26,000 Acres)	No Action/No Wilderness	All Wilderness (31,160 Acres)
Impacts on Livestock Management	Impacts on access for livestock management and predator control would be about the same as with the All Wilderness Alternative because access would be restricted on the 3 to 4 miles of ways used for livestock management on the east side of the river, and restrictions would be placed on methods of predator control on 83 percent of the WSA. An estimated 63 AUMs of additional forage could be produced because 500 acres would be burned and seeded in the nondesignated area.	Livestock grazing levels and management practices would not be affected because grazing would continue without restriction for protection of wilderness values. The proposed 500-acre burning and seeding would provide 63 additional AUMs.	The WSA has approximately 22.5 miles of ways; three to 4 miles of these ways on the east side of the Colorado River are used by permittees for livestock management during the grazing season, for distribution of salt, and to do maintenance on existing rangeland improvement projects. Restrictions of vehicle use on these ways would be an inconvenience to permittees. Five permittees would be adversely affected by increases in cost and time to manage livestock. Predator control is important to the five permittees, approximately 70 percent of past predator control has been done with cyanide guns (M-44s), which are prohibited in wilderness areas. The prohibition of this control method may increase livestock losses, mainly for three permittees that graze sheep in the WSA. The loss of the 500-acre seeding would mean the loss of 63 AUMs of forage on the public land.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation Partial Wilderness (26,000 Acres)	No Action/No Wilderness	All Wilderness (31,160 Acres)
Impacts on Recreation	River-based recreation use would remain constant. The wild and scenic values of the portion of the Colorado River that flows through the WSA would be in the designated area and would receive additional protection. Approximately 30 visitor days of present ORV use would be precluded initially. This would not significantly reduce ORV use on a regional basis. Overall, land-based recreation would increase to be between 917 and 2,640 visitor days per year by the year 2020.	Recreational use of the Colorado River would be controlled by BLM and would continue at about 14,000 visitor days per year. Annual land-based recreational use in the WSA would increase from the present 470 visitor days to be between 980 and 2,820 visitor days by the year 2020. About 13 percent of the land-based recreation use would involve vehicle access on about 20.5 miles of existing ways.	River-based recreation on the Colorado River in the WSA would continue at about 14,000 visitor days per year because use is near maximum levels and would be controlled by BLM. The wild and scenic values of this portion of the Colorado River would receive additional protection. Land-based primitive recreation in the WSA is expected to increase to be between 855 and 2,260 annual visitor days by the year 2020. The present 60 visitor days of ORV use and the potential for increases in ORV use would be elimintated. ORV use would not decline on a regional basis.
Impacts on Local Economic Conditions	Economic trends and conditions would not be significantly affected. Recreation related sales, including commercial river-based recreation, could contribute up to $1,510,824 annually to the local economy by the year 2020. The WSA could contribute up to $12,100 annually in local livestock sales and $932 in Federal and State oil and gas leasing revenues of up to $50,498 per year could be foregone. Recreational river use would continue to provide about $32,217 in Federal revenues annually.	Present economic conditions would not be affected. Recreation-related sales including commercial river based recreation could contribute up to $1,511,562 annually to the local economy by the year 2020. The WSA could contribute up to $12,100 annually in local livestock sales and $932 in Federal grazing fees. Although unlikely, oil and gas leasing revenues could contribute up to $60,818 per year in Federal and State revenues. Federal fees collected from private and commercial river use would continue to be about $32,217 annually.	Present economic conditions would not be significantly affected. Recreation-related sales, including commercial river-based recreation, could contribute up to $1,510,086 annually to the local economy by the year 2020. The WSA would continue to contribute up to $10,900 annually in local livestock sales and $840 in Federal grazing fees. Potential for $1,260 in livestock sales and $315 in Federal grazing fees would be foregone. Although unlikely, potential annual Federal and State oil and gas leasing revenues of up to $60,818 per year could be foregone.

WESTWATER CANYON WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

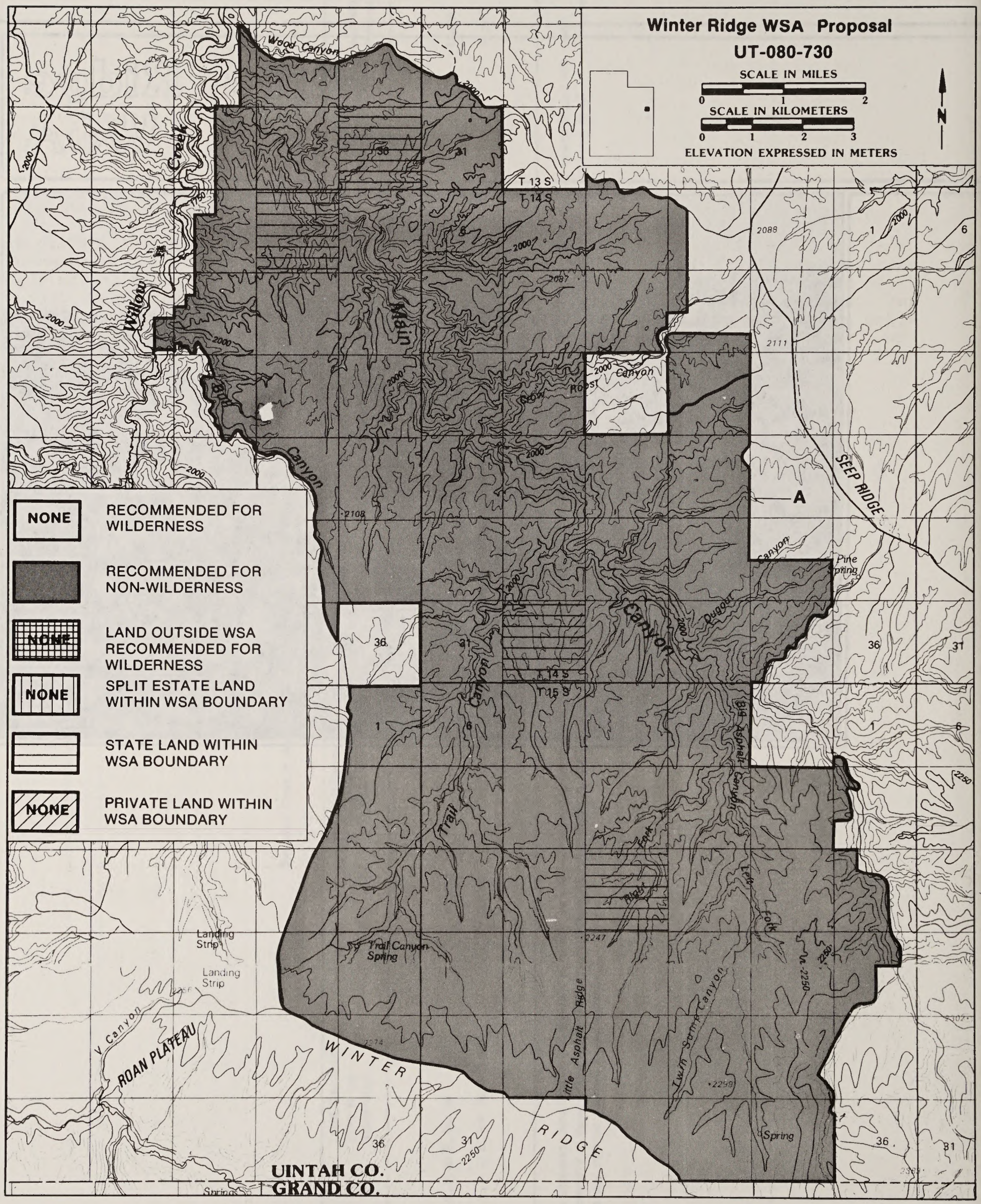
Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (if Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 20 S., R. 25 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 21 S., R. 25 E., Sec. 16, E1/2, SW	480.00		State	State	No	Exchange		$1,500

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.

Winter Ridge WSA



WINTER RIDGE WSA



October 1991

WINTER RIDGE WILDERNESS STUDY AREA

1. THE STUDY AREA: 42,462 acres

The Winter Ridge WSA (UT-080-730) is in the Book Cliffs in southern Uintah County, and is about 60 miles south of Vernal, Utah (population 6,600). The study area extends about 12 miles from north to south and 5 miles from east to west. The WSA is bounded on the north-west and east by State and private land. The southern boundary of the WSA is along the Uintah and Grand County line and the crest of Winter Ridge. The southwestern edge of the WSA is along a divide between canyons. Canyons form the northern and central western boundaries. Seep Ridge road, the major access route in the immediate region, is less than a mile east of the WSA.

Four State sections (2,561 acres) are within the WSA (see Map and Table 1). The main feature in the northern part of the WSA is Main Canyon, a relatively shallow canyon that drains towards the northwest. Tributary canyons and the northern slopes of Winter Ridge comprise the southern portion of the unit. Elevations in the WSA range from 5,700 to 7,600 feet. Vegetation is predominantly pinyon-juniper woodland and sagebrush.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah Bureau of Land Management (BLM) Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface	42,462
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	2,561
Total	45,013
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	42,462
Split-Estate	0
Total BLM land not recommended for wilderness	42,462
In-holdings (State, Private)	2,561

Source: BLM File Data

Three alternatives were analyzed in the EIS: a no wilderness (no action) alternative which is the recommendation in this report, an all wilderness alternative, and a partial wilderness alternative of 28,044 acres.

2. RECOMMENDATION AND RATIONALE:
0 acres
(recommended for wilderness)
42,462 acres
(not recommended for wilderness)

The recommendation for this WSA is to release the area for uses other than wilderness. Designation of the entire area is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

Although about 84 percent of the WSA is natural and 75 percent has outstanding opportunities for solitude, none of the area has outstanding opportunities for primitive and unconfined recreation. Oil and gas leases are held by production on about 25 percent of the WSA. Existing facilities within the WSA include 14 gas wells, 19 miles of service roads, and 7.6 miles of pipeline, all constructed in the WSA under pre-existing lease rights. The estimated oil and gas resources take precedence over wilderness values.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Approximately 84 percent (35,835 acres) of the WSA barely meet the wilderness criteria for naturalness. The remaining 6,627 acres lack naturalness. The area varies from deep canyons to rolling terrain and has light green, dark green, and gray-green vegetation.

Oil and gas activities and livestock grazing caused most of the human imprints in the WSA. Oil and gas activities included well drilling in the northern portion of the WSA and along the southern edge, construction of 16.9 miles of roads and upgrading of 2.1 miles, and clearing of 25 acres for drill pads. Some of the actions required major cuts and fills. In addition, there are a 4-inch buried pipeline along the northern edge of the WSA and another buried pipeline 7.6 miles long in Main Canyon; a total of 9.5 miles of barbed-wire fence with steel and "cedar" posts; 7 acres of study plots; 4 spring developments in the southern part of the WSA; 4 small livestock reservoirs; 2 water wells; 45 acres of pinyon-juniper removal (chaining); and a total of 13 miles of ways.

Many of these imprints are not readily noticeable, but gas wells and associated features in Main Canyon, including the 13.6 miles road, major cuts and fills for three drill pads, and a producing well with a 2-mile access road in the southwest corner of the WSA are obvious to visitors seeking wilderness values and distinctly contrast with naturalness.

B. Solitude

About 10,565 acres (25 percent of the WSA) do not have outstanding opportunities for solitude. In the remaining 31,897 acres, opportunities for solitude are generally good.

Traffic noises and the sounds of drilling are audible for an average of a 0.5 mile from their origins, and affect much of Main Canyon, in the central part of the WSA. Vegetation and terrain generally do not provide screening.

On the flat ridge tops, where dense stands of pinyon-juniper grow, and around the heads of the shallow side canyons, vegetation and terrain provide screening from sights and sounds.

C. Primitive and Unconfined Recreation

Opportunities for primitive recreation are not outstanding in the WSA because of general lack of a focal point of interest or a diversity of vegetation and other features.

D. Special Features

The WSA has year-round populations of cougar, elk, and black bear which are species associated with wilderness. The peregrine falcon and bald eagle, listed as endangered, and six other animal species considered sensitive may occur in the WSA. Three plant species considered as sensitive also may occur in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a PNV ecosystem not presently represented nationally in the NWPS, but it would add a potential ecosystem not currently represented in the NWPS in Utah. It would also add the largest acreage (42,462 acres) of that PNV. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Rocky Mountain Forest Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (42,462 acres). The PNV in the WSA is represented in the NWPS nationally and in other BLM study areas both in and outside of Utah, but is not represented in the NWPS in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of Salt Lake City-Ogden, Utah and Provo-Orem, Utah. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

C. Balancing the Geographic Distribution of Wilderness Areas

The Winter Ridge WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (ROCKY MOUNTAIN FOREST PROVINCE)				
Juniper-Pinyon Woodland	2	41,451	19	125,174
UTAH (ROCKY MOUNTAIN FOREST PROVINCE)				
Juniper-Pinyon Woodland	0	0	3	4,606

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,217,213
Provo-Orem, Utah	11	721,793	90	2,744,406

Source: BLM File Data.

As of January, 1987, the NWPS included 59 areas comprising 6,528,263 acres in Utah and in Colorado and Wyoming, the adjacent states nearest the WSA.

A Winter Ridge Wilderness would supplement wilderness areas in the Uintah Basin in northeastern Utah. There is only one designated wilderness within 100 miles of the WSA. Northwest of the WSA is the 456,705-acre High Uintahs Wilderness (U.S. Forest Service [FS]).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

In the foreseeable future, the WSA could not be managed to preserve wilderness values. Ongoing oil and gas production activities would continue to detract from wilderness values in the WSA. Overall, in the long term, the WSA could be managed as wilderness. There are about 9,241 acres (22 percent) of the WSA in leases issued prior to the FLPMA that are held by production. These leases could be fully explored and developed as valid rights, regardless of the impact on wilderness values. However, BLM projects that only 34 acres of the WSA would be directly disturbed and that wilderness values would be indirectly reduced on about 1,300 acres of the WSA. Wilderness designation would prevent leasing of tar sand deposits in the WSA, therefore, tar sand developments and their potential impact on wilderness values would be prevented.

Development of mining claims is not a threat to wilderness management in this WSA because there are no mining claims inside the WSA and it is withdrawn from mining claim location.

There are four State sections in-held in the WSA. BLM projects that oil and gas exploration and limited development will occur on these lands in the foreseeable future and that only about 12 acres of the WSA would be disturbed by provision of reasonable access to these lands. In the long term, tar sand extraction activities on the adjacent State section (T. 14 S., R. 22 E., Sec. 16) could reduce the quality of wilderness values in the northeast portion of the WSA. Tar sand extraction is not expected on the in-held State lands.

Continued operation in rights-of-way for two small diameter pipelines in the WSA would not significantly affect overall management of the WSA for protection of wilderness values.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for the area. According to BLM geologists, the Winter Ridge WSA is in an area that has established oil and gas, tar sand, and oil shale potential. The WSA is considered favorable for locating a shallow gas field with ultimately recoverable total reserves of up to 60 billion cubic feet. Daily production of natural gas from within the WSA currently totals about 7.5 million cubic feet from 10 wells.

Estimated reserves in the WSA are 48 million barrels of shale oil. About 35,500 acres of the P.R. Springs Special Tar Sand Area are in the WSA. Almost all of the eastern two-thirds of the WSA is underlain by a 10- to 15-foot thick, continuous tar sand sequence that could

yield about 15,000 barrels of oil per acre. The remaining portion of the WSA contains tar sand of lower quality. About 500 million barrels of oil are predicted to occur in tar sands in the WSA. The WSA consequently is considered to have a relatively high importance for possible fluid hydrocarbon resources.

Coal may occur at relatively great depth in the WSA, but coal seams are thin and the coal is probably of low quality.

The occurrence of other minerals is speculative. Because the WSA is in an oil shale withdrawal, mining claims are prohibited. The WSA has no demonstrated potential for locatable minerals. The geologic conditions indicate that uranium or vanadium and copper may exist at considerable depth.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Present economic conditions would not be affected. Employment for oil and gas exploration and production would continue. Employment of 300 people in the production of oil from tar sand would represent about 2.1 percent of the projected Uintah County employment in the year 2010. There would be minor beneficial and adverse economic impacts. By the year 2020, the WSA would contribute up to $15,580 annually in local sales related to recreation. Considering proposed vegetation treatments and possible tar sand development, livestock sales would add $3,545 in Federal grazing revenues each year. Tar sand royalties from the WSA would contribute about $1.8 million per year to the Federal treasury for about 100 years while gas royalties of $50,000 per year would continue and could increase from $20,000 to as much as $100,000 per year per well depending on the demand for natural gas.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 22 inputs specifically addressing this WSA were received from 22 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, six commenters supported wilderness designation for part or all of the WSA, while 10 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented on the general wilderness values in the WSA. The majority of those commenting in favor of wilderness were from outside of Utah. Of particular concern was the need to protect wilderness and other values in the WSA.

Those opposing wilderness were concerned that wilderness would preclude mineral exploration and development. Most of the commenters were from rural Utah.

No Federal agency commented on the Draft EIS for this WSA or expressed any opinion regarding wilderness designation.

No comment letters were received on the Final EIS.

There are four State sections (2,561 acres) in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation of the WSA. The State commented that the Winter Ridge WSA has the lowest wilderness values and the highest degree of conflicts of all the WSAs in the East-Central region of the State. The State perceives the major conflicts to be with mineral and energy resources and other land uses.

WINTER RIDGE WILDERNESS STUDY AREA

The Winter Ridge WSA is in Uintah County. The Uintah County Master Plan does not specifically address the Winter Ridge WSA, but the County planning staff has stated that designation of the WSA as wilderness would conflict with present land use, which encourages development of the oil and gas reserves. In commenting on the Draft EIS, the Uintah County Commission opposed designation of the area because in their opinion, it has already been impacted by oil and gas development, it lacks wilderness values, and the area is more valuable for oil and gas production than wilderness. The Uintah County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

WINTER RIDGE WSA

Table 4
Comparative Summary of Impacts by Alternative

Issue Topic	Recommendation No Action/No Wilderness	All Wilderness (42,462 Acres)	Partial Wilderness (28,044 Acres)
	Alternatives		
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on 879 acres and indirectly reduced in quality on up to about 10,600 acres. The disturbance would be due to oil and gas exploration and development, rangeland development, vegetation treatment, and providing access to State in-holdings. Vehicular use of existing and future ways and roads would detract from the quality of solitude and primitive recreation in the WSA. Long-term tar sand development would result in a direct loss of wilderness values on 1,965 acres of the WSA, and indirect reduction in the quality of wilderness values throughout the WSA. Wildlife associated with wilderness would be displaced.	Wilderness designation would protect the wilderness values of the WSA. In the short term, opportunities for solitude and primitive recreation would be directly lost on 34 acres of the WSA and indirectly reduced in quality on up to about 1,300 acres due to valid existing rights. Special features would be preserved. The ex-tent of loss that would occur over the long term would be much less with this alternative than with the No Action/No Wilderness Alternative because tar sand development would not occur and the area would be closed to ORV use.	Wilderness values would be protected in the designated area, which is approximately 66 percent of the WSA. In the short term, naturalness and opportunities for solitude and primitive recreation would be directly lost on 75 acres of the WSA and would be indirectly reduced in quality on up to 3,800 acres. The disturbance would be due to oil and gas exploration and development, rangeland development, vegetation treatment, and providing access to State in-holdings. Most of the impact would be in the nondesignated area. Vehicular use of existing ways and future roads in the nondesignated portion would detract from the quality of opportunities for solitude and primitive recreation. Long-term tar sand development in the nondesignated area would result in a direct loss of wilderness values on about 1,000 acres and an indirect reduction in the quality of the wilderness values throughout the WSA. This indirect impact would be to half the degree that would occur eith the No Action/No Wilderness Alternative. Wildlife would be displaced but impacts on wildlife would be less than with the No Action/No Wilderness Alternative because the best wildlife habitat would be in the designated area.
Impacts on Air Quality	Air quality would not be significantly reduced by activities in the WSA. In the long term, tar sand mining would result in temporary violations of PSD Class II TSP standards.	Air quality would not be affected by activities within the WSA because tar sand development would not occur.	Impacts would be about the same as with the No Action/No Wilderness Alternative because tar sand would be mined in the nondesignated area.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (42,462 Acres)	Partial Wilderness (28,044 Acres)
Impacts on Geology and Topography	In the long term, geologic and topographic features would be altered significantly on 1,965 acres as a result of tar sand mining.	Geologic and topographic features would not be significantly affected because the potential for surface mining would be eliminated.	In the long term, geologic and topographic features would be significantly altered on 2.4 percent (1,000 acres) of the WSA as a result of tar sand development in the nondesignated area.
Impacts on Soils	Overall, there would be a 6 percent increase in sediment yield from the WSA. This would be significant on a localized basis. Discharge of sediment and salts into the Green River drainage would not be significantly increased because mitigation would be required, there are no perennial streams in the WSA and the disturbance would mainly be on an upland plateau.	Impacts on soils and increased erosion would be insignificant because sediment yield from the WSA would increase by only 0.1 percent.	Overall there would be a 2 percent increase in sediment yield from the WSA. Impacts would be about the same as with the No Action/No Wilderness Alternative because tar sand would be mined in the nondesignated area.
Impacts on Vegetation	Over the long term, up to 6.7 percent (2,844 acres) of the vegetation types in the WSA would be altered or destroyed. Populations of special status species would be protected even though inadvertent loss of some individual plants would occur.	Vegetation types and special status species would be protected because potential disturbance would be reduced from 2,844 acres to 34 acres.	Over the long term, 2.5 percent (1,075 acres) of the vegetation types would be altered or destroyed. Populations of special status plant species would be protected even though individual plants may be inadvertently destroyed.
Impacts on Water Resources	In the short term, ground and surface water quality and quantity would not be affected. Over the long term, tar sand development would reduce quantities of groundwater by about 700 acre-feet per year. It would not significantly affect the Green and Colorado Rivers' salinity or water flows because precipitation is low, all drainages in the WSA are ephemeral and mitigation would be required.	Ground and surface water quality and quantity in the WSA would be protected.	Water quality, quantity, and uses would not be affected in the short term. Over the long term, tar sand development would reduce the quantity of groundwater in the nondesignated area by 700 acre-feet per year but for a shorter period of time than with the No Action/No Wilderness Alternative. Salinity or flows in the Green and Colorado Rivers would not be significantly affected.

WINTER RIDGE WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	 All Wilderness (42,462 Acres)	 Partial Wilderness (28,044 Acres)
Impacts on Mineral and Energy Exploration and Production	Implementation of this alternative would not significantly affect mineral exploration or production because mineral leasing, exploration, and development could occur without restrictions for protection of wilderness values.	Long-term potential for production of up to 375 million barrels of oil from tar sand and an unknown but locally significant amount of natural gas and oil would be foregone.	Recovery of up to 248 million barrels of oil from tar sand and an unknown portion of the oil and gas in the WSA would be foregone. However, in the nondesignated area up to 127 million barrels of oil from tar sand and a portion of the oil and gas could be recovered.
Impacts on Wildlife Habitat and Populations	In the short term, some wildlife species may be displaced or otherwise affected by oil and gas activities on 160 acres and continued use of vehicular or roads or ways big game would benefit from rangeland developments. Reductions in populations can be expected if long-term development of tar sand occurs on 1,965 acres (affecting up to 500 acres at any one time) due to large restructuring of habitat components. Some benefits would also result from increased forage resulting from reclamation.	Overall, wildlife species and their habitat would benefit from wilderness designation because it would prevent large scale development of tar sand. Eight proposed springs could be developed which would expand species diversity, distribution, and possible population levels. Opportunities for improving wildlife habitat by vegetation manipulation or construction of reservoirs would be foregone. Special status species would be protected.	Impacts on wildlife species and their habitat would be similar to those with the All Wilderness Alternative because the best wildlife habitat in the WSA would be in the designated area. Overall, wildlife species and their habitat would benefit from partial wilderness designation because the potential for surface disturbance and human intrusion would be reduced on 66 percent of the WSA. Eight proposed spring developments could be completed which would expand species diversity, distribution and possible population levels. Opportunities for improving wildlife habitat would be foregone because of prevention of reservoir construction and treatment of vegetation. Populations of special status species would be protected.

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (42,462 Acres)	Partial Wilderness (28,044 Acres)
Impacts on Livestock Management	In the short term, livestock management would not be adversely affected and would benefit from rangeland developments. In the long term, available forage would be reduced by about 18 AUMs for the duration of tar sand activities.	Restrictions on vehicle use on 13 miles of ways would be an inconvenience for six permittees. Livestock management techniques would be altered and operating costs could increase. Opportunities to improve livestock distribution and increase forage by 105 AUMs would be foregone because construction of proposed reservoirs and vegetation treatments would not be possible.	Restrictions on vehicle use on 10 of the 13 miles of ways would be an inconvenience for six permittees. Livestock management techniques would be altered and operating costs could increase. Opportunities to improve livestock distribution and increase forage by 105 AUMs would be foregone because construction of proposed reservoirs and vegetation treatments would not be possible.
Impacts on Cultural Resources	Inadvertent loss or damage to archaeological sites including 26 recorded sites, may occur due to surface developments and ORV use. Intentional vandalism and artifact collection may increase due to increased activity and accessibility. Cultural resource management would continue without regard to wilderness management considerations.	Cultural resources would receive additional protection from the effects of surface disturbance and vandalism because potential disturbance would be reduced from 2,844 acres to 34 acres and the area would be closed to ORV activity. Cultural resources could be inadvertently damaged by the 34 acres of projected surface disturbance but impacts would be minor because only 0.08 percent of the WSA would be disturbed. Cultural resource management may be limited in scope and execution in order to protect other wilderness values.	Approximately 13 of the 26 recorded sites would receive protection as a result of wilderness designation. All sites in the nondesignated portion of the WSA would continue to be protected by existing laws. Inadvertent loss or damage to archaeological sites may occur due to 1,075 acres of surface disturbance in the WSA and/or continued use of vehicles in the nondesignated area. Cultural resource management may be limited in scope and execution on 66 percent of the WSA in order to protect other wilderness values.
Impacts on Recreation	This alternative would not significantly affect recreational use in the WSA. Motorized recreational use would increase over present levels by 2 to 7 percent per year for the foreseeable future. In the long term, levels of use would be reduced because of the intrusion of tar sand development.	Overall, recreational use of the area would initially decline following wilderness designation and would not reach the levels projected for the No Action/No Wilderness Alternative (up to 3,800 visitor days by the year 2020) because primitive recreation would probably not replace vehicle-based recreation in this area. Hunting would be the primary recreation use affected.	Overall, recreational use of the area would initially decline following wilderness designation and would not reach the levels projected for the No Action/No Wilderness Alternative (up to 3,800 visitor days by the year 2020) because primitive recreation would probably not replace vehicle-based recreation in this area. Hunting would be the primary recreation use affected.

WINTER RIDGE WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation No Action/No Wilderness	All Wilderness (42,462 Acres)	Partial Wilderness (28,044 Acres)
Impacts on Economic Conditions	Present economic conditions would not be affected. Employment in oil and gas exploration and production in the WSA would continue. Employment of 300 people in production of oil from tar sand would represent about 2.1 percent of the projected Uintah County employment in the year 2010. There would be minor beneficial and adverse economic impacts. By the year 2020, the WSA would contribute up to $15,580 annually in local sales related to recreation. Considering proposed vegetation treatments and possible tar sand development, livestock sales and $3,545 in Federal grazing revenues each year. Tar sand royalties from the WSA would contribute about $1.8 million per year to the Federal treasury for about 100 years while gas royalties of $50,000 per year would ocntinue and could increase from $20,000 to as much as $100,000 per year per well depending on demand for natural gas.	Present economic conditions would not be affected. The potential for 300 jobs, 2.1 percent of the projected Uintah County employment in the year 2010, would be foregone. Annual local recreation-related sales would be less than with the No Action/No Wilderness Alternative (less than $15,580 by the year 2020) because primitive recreational use would probably not replace motorized use. Livestock grazing would continue to contribute $44,300 in local sales and $3,411 in Federal revenues annually but potential livestock-related sales and revenues would be reduced by $1,740 and $134 respectively as compared to the No Action/No Wilderness Alternative because potential vegetation treatments would not be allowed. Annual oil, gas, and tar sand leasing fees of up to $66,442 would be foregone as would tar sand royalty payments of about $1.8 million annually for about 100 years and oil and gas royalties of between $20,000 and $100,000 per well per year on future wells on 79 percent of the WSA.	Present economic conditions would not be affected. Employment for oil and gas exploration and production would continue but for a shorter period of time than with the No Action/No Wilderness Alternative. Oil production from tar sand in the nondesignated portion fo the WSA would employ abou 300 people (about 2.1 percent of the projected Uintah County employment in the year 2020), but the duration of mining, employment, and related beneficial and adverse economic impacts would be reduced because only 34 percent of the tar sand in the WSA could be mined. Annual local recreation-related sales would be less than with the No Action/No Wilderness Alternative (less than $15,580). Livestock grazing would continue to contribute $44,300 per year in local sales and $3,411 in Federal revenues annually but potential annual livestock related sales and revenues would be reduced by $1,740 and $134, respectively, as compared to the No Action/No Wilderness Alternative because proposed vegetation treatments would not be allowed. Annual Federal and State oil and gas and tar sand leasing fees of up to $41,726 would be foregone as would potential royalties on oil, gas, and tar sand production from 49 percent of the WSA.

Daniels Canyon WSA



DANIELS CANYON WSA

R. 24 E.

R. 25 E.

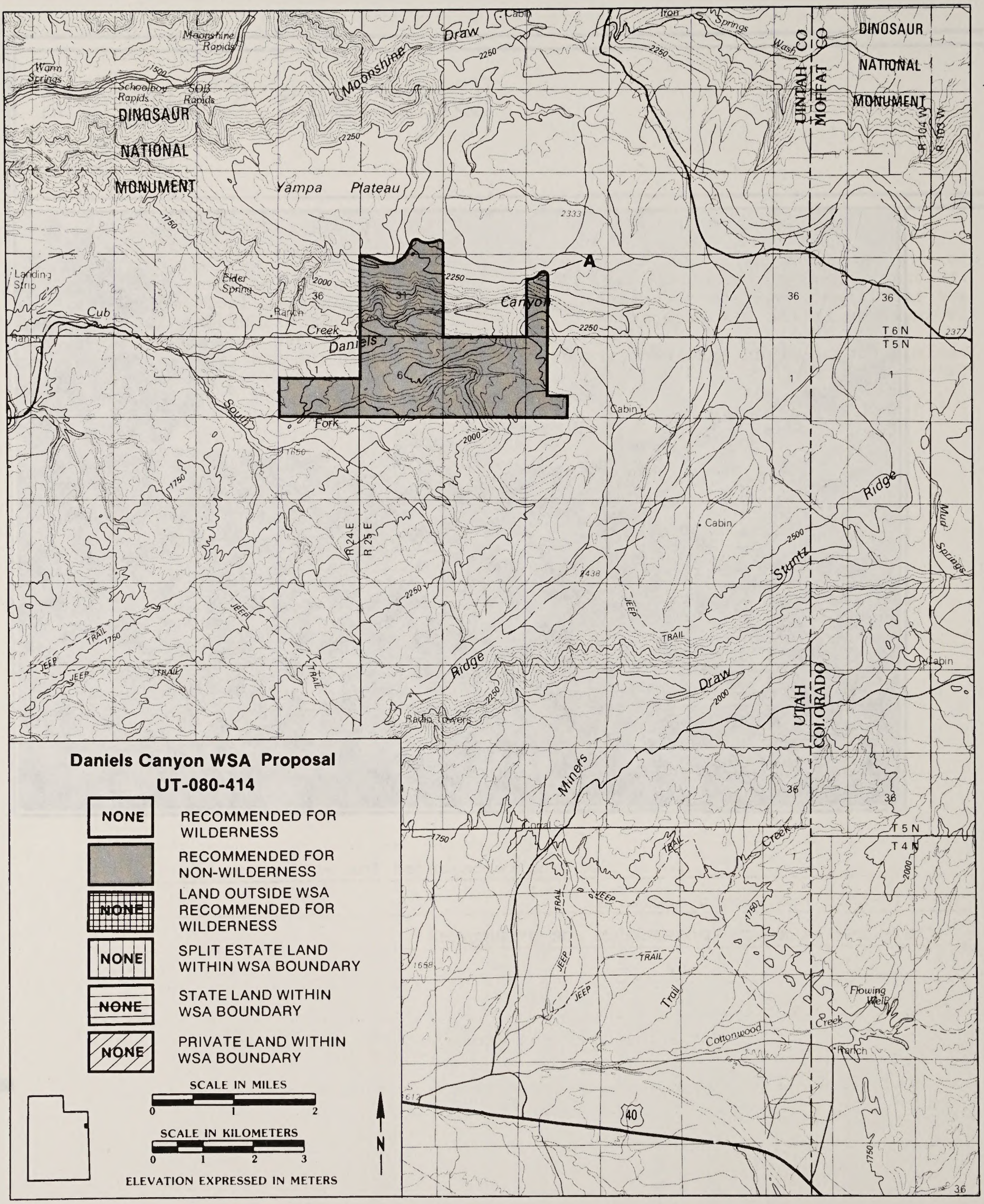
T. 4 S.

T. 6 N.

T. 5 S.

T. 5 N.

T. 4 N.



Daniels Canyon WSA Proposal
UT-080-414

NONE	RECOMMENDED FOR WILDERNESS
	RECOMMENDED FOR NON-WILDERNESS
NONE	LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS
NONE	SPLIT ESTATE LAND WITHIN WSA BOUNDARY
NONE	STATE LAND WITHIN WSA BOUNDARY
NONE	PRIVATE LAND WITHIN WSA BOUNDARY

SCALE IN MILES
0 1 2

SCALE IN KILOMETERS
0 1 2 3

ELEVATION EXPRESSED IN METERS

N

October 1991

DANIELS CANYON WILDERNESS STUDY AREA

1. THE STUDY AREA: 2,496 acres

The Daniels Canyon Wilderness Study Area (WSA) (UT-080-414) is in eastern Uintah County, about 22 miles east of Vernal, Utah (population 6,600). The unit is about 2 miles from north to south and 3 miles wide from east to west (see Map). The WSA is adjacent to Dinosaur National Monument, private, and State land to the west; and is bordered by State land in part on the north and by private land on the east. The southern boundary is along section lines. No State or private land is included in the WSA (see Table 1).

Daniels Canyon is an east-west trending canyon with vertical walls as much as 900 feet high on the south side and 1,600 feet on the north side. Elevations in the WSA range from 5,600 feet on Cub Creek, in the central part, to 7,720 feet on the eastern boundary. Pinyon-juniper woodland, intermixed with sagebrush, predominates in the WSA.

The WSA was dropped from wilderness study status by the Secretary of the Interior on December 30, 1982 because of its small size, but was reinstated, due to court decision, on April 18, 1985.

The WSA was studied under Section 202 of the FLPMA and was included in the Utah BLM Statewide Wilderness EIS finalized in November, 1990. Two alternatives were analyzed in the EIS: a no wilderness (no action) alternative which is the recommendation in this report, and an all wilderness alternative.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA

WITHIN THE WSA	ACRES
BLM (surface and subsurface)	2,496
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	0
Total	2,496
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	0
BLM (outside the WSA	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	0
In-holdings (State, private)	0
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	2,496
Split-Estate	0
Total BLM land not recommended for wilderness	2,496
In-holdings (State, Private)	0

Source: BLM File Data

2. RECOMMENDATION AND RATIONALE:
0 acres
(recommended for wilderness)
2,496 acres
(recommended for nonwilderness)

The recommendation for this WSA is to release the area for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts.

All of the WSA is natural and has outstanding opportunities for solitude, but none of the area is considered to have outstanding opportunities for primitive and unconfined recreation. Because of its small size, the WSA would need to be managed in conjunction with the NPS proposed wilderness in the adjacent Dinosaur National Monument. The WSA has land forms that are a continuation of the land forms found in Dinosaur National Monument, but the common boundary between the WSA and the monument is a precipitous sandstone cliff which constitutes a natural barrier that prevents visitor access between the two areas and is not conducive to joint administration. In order to ensure a suitable physical connection between the WSA and the monument, 640 acres of State land and 320 acres of private land would have to be acquired and incorporated into the wilderness area. Acquisition of these lands may not be possible. Wilderness designation of the WSA alone would not significantly complement the proposed wilderness resource of the monument.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

The entire WSA meets the criteria for naturalness. The WSA generally appears natural with a scenic deep canyon, exposed red and cream colored rock outcrops and geologic formations combined with gray-green vegetation. Only a few imprints caused by human activity exist in the WSA. An actively used stock drive trail along the side of Daniels Canyon resembles a hiking trail and does not greatly affect naturalness. Daniels Canyon itself has retained its primeval character. Near the top of Blue Mountain is a well-screened 0.25-mile long brush fence. A small maze of jeep trails, totaling about 2 miles in length, that were built for uranium exploration in the 1950s currently are little used and have eroded into 4-wheel drive ways. Two livestock reservoirs in the WSA are small and unobtrusive. A spring developed many years ago near the east boundary provides livestock water in a trough screened by vegetation. A 200 yard gap fence was built by the NPS to mark the boundary of Dinosaur National Monument along the west edge of the WSA.

B. Solitude

All 2,496 acres meet the criteria for outstanding opportunities for solitude. Terrain and vegetative screening provide solitude in the north, and the canyon, a partially razor-backed ridge, and scattered pinyon and juniper trees provide screening in the southern portion of the WSA. Jensen and Vernal can been seen from the higher parts of the WSA but, because of the distance, individual features such as roads and buildings cannot be distinguished. Only the lights of these towns can be seen at night. Sounds from the towns and U.S. Highway 40 are not audible in the WSA. The unpaved Blue Mountain road south of the WSA is frequently used, especially during hunting seasons, and does cause some minor distraction.

C. Primitive and Unconfined Recreation

Recreational opportunities and experience are not considered outstanding because of the relatively small size of the WSA, the lack of scenic diversity, and the confining terrain. Hiking opportunities are only a moderate extension from those available in the adjacent proposed wilderness in Dinosaur National

Monument. State land must be crossed when hiking or horseback riding in Daniels Canyon on the livestock trail or crossing into the National Park Service (NPS)-proposed wilderness.

Hiking and horseback riding are the best forms of primitive and unconfined recreation and are benefitted by panoramic views, photographic opportunities, and the chance to view wildlife and wild flowers. Recreationists can continue on 2 miles to the Yampa Plateau, outside the WSA, for an outstanding overlook of Split Mountain Gorge, but continuing on into the Monument is difficult because of steep terrain and confining wilderness boundaries that follow the canyon rim along the Green River.

D. Special Features

Outstanding views of the surrounding countryside from within the WSA and archaeological sites enhance the WSA.

Cougar, a wildlife species associated with wilderness is found in the WSA. The black-footed ferret, bald eagles, and peregrine falcons, listed as endangered species may occur in the WSA. In addition, eight animals and three plant species considered sensitive may occur in the WSA.

Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a potential natural vegetation (PNV) ecosystem not presently represented in the NWPS outside of Utah, but, if the WSA were designated as a wilderness area, would add a PNV not now represented in the NWPS or in other BLM study areas in Utah. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area. The WSA is in the Rocky Mountain Forest Province/Ecoregion. The PNV in the WSA is sagebrush steppe (2,496 acres). The PNV in the WSA is represented in the NWPS nationally and in other BLM study areas outside of Utah, but is not represented in either system in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of Salt Lake City-Ogden, Utah and Provo-Orem, Utah. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (ROCKY MOUNTAIN FOREST PROVINCE)				
Sagebrush Steppe	4	76,129	22	245,347
UTAH (ROCKY MOUNTAIN FOREST PROVINCE)				
Sagebrush Steppe	0	0	0	0

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,257,179
Provo-Orem, Utah	11	721,793	90	2,784,372

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The Daniels Canyon WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 59 areas comprising 6,528,263 acres in Utah and in Colorado, and Wyoming, the adjacent states nearest the WSA.

The Daniels Canyon WSA is too small, however, to contribute significantly to the NWPS in northeastern Utah/northwestern Colorado. There are two designated wilderness areas within 100 miles of the WSA. To the northwest is the 456,705-acre High Uintas Wilderness (U. S. Forest Service [FS]) and to the east, in Colorado, the 235,035-acre Flat Tops Wilderness (FS).

Manageability (The area must be capable of being managed effectively to preserve its wilderness character.)

Overall, the WSA could be managed as wilderness. Because there are no State or private lands in the WSA, access and exchange or purchase would not have to be considered.

There are no mining claims in the area at present, and mineral-related developments are not anticipated. There are 2,176 acres of the WSA in post-FLPMA oil and gas leases that are subject to stipulations for the protection of wilderness values. These leases will likely expire without being explored and therefore would not affect the manageability of the WSA.

Livestock grazing and maintenance of existing developments would continue following designation. Maintenance of a brush fence, spring development, two reservoirs, and a livestock trail could be managed to avoid negative effects on the wilderness values of the area.

Energy and Mineral Resource Values

Because the WSA is not recommended for wilderness designation, the U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) did not prepare a mineral assessment report for the area. According to BLM geologists, the Daniels Canyon WSA has no history of mineral production and the occurrence of mineral resources is speculative. Consequently, the WSA has been assigned a very low importance rating for mineral resources.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on wilderness values which are considered to be the only pertinent resources that would be affected by designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

DANIELS CANYON WILDERNESS STUDY AREA

During formal public review of the Draft EIS, a total of 35 inputs specifically addressing this WSA were received from 35 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 23 commenters supported wilderness designation for part or all of the WSA, while nine commenters were opposed. Three commenters addressed the relative merits of the EIS, but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA contains wilderness values although these values generally were not identified, and that designation would complement the proposed adjacent NPS wilderness. The majority of those commenting in favor of wilderness were from outside of Utah, but nearly as many favoring wilderness were from rural Utah.

Those opposing wilderness were concerned that wilderness would restrict flood, weed, pest, and fire control and general public access. Opponents of wilderness designation were mostly from rural Utah.

One Federal agency, the NPS, commented on the Draft EIS for this WSA. The NPS noted that the WSA has been identified by the Secretary of the Interior for further study for addition to Dinosaur National Monument. The NPS believes that the WSA has wilderness characteristics and the land forms in the area are a continuation of those in the monument. The NPS also requested that BLM manage the WSA in a manner compatible with adjacent NPS lands if the WSA is not designated as wilderness.

No comment letters were received on the Final EIS.

There are no State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State commented that in their opinion, the Daniels Canyon WSA has both low wilderness values and conflicts compared with other WSAs in the region. The State also noted the potential for conflict with the development of a private water right and suggested further study of transferring administration of the unit from the BLM to the NPS.

The Daniels Canyon WSA is in Uintah County. The Uintah County Master Plan does not specifically address the WSA. In commenting on the Draft EIS, the Uintah County Commission expressed the opinion that if the Daniels Canyon WSA is designated as wilderness it will be transferred to the NPS. This would mean closing the area to big-game hunting and predator control which would not be in the best interests of the County residents. The Uintah County Commission has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.

DANIELS CANYON WSA

Table 4
Comparative Summary of Impacts by Alternative

	Alternatives	
Issue Topic	Recommendation No Action/No Wilderness	All Wilderness (2,946 Acres)
Impacts on Wilderness Values	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, no surface disturbing projects or other activities that would reduce the quality of wilderness values in the WSA are expected. This alternative would not enhance or complement wilderness values and management of the contiguous portion of Dinosaur National Monument, which is proposed by the NPS for wilderness designation.	Wilderness values would be preserved throughout the WSA. Designation would enhance and complement wilderness values and management of the contiguous portion of Dinosaur National Monument, which is proposed by the NPS for wilderness designation.

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